UGC NET

NODIA

CHAPTERWISE QUESTION BANK

DISASTER MANAGEMENT

- Full Explanation for Every Question
- Strictly Based on Latest Syllabus
- Matches the Real Exam Pattern Exactly
- Predicted Questions for Upcoming Exam

Scan QR for Demo PDF

Nodia

GET ALL STUDY MATERIAL IN ONE APP!

Textbooks

Previous Year
Chapterwise Question Banks

30 Sets
Sample Papers

Worksheets

FREE!

DOWNLOAD NOW!

SCAN & DOWNLOAD

GET IT ON Google Play

UGC NET 2026

DISASTER MANAGEMENT

CHAPTER-WISE MCQ QUESTION BANK
INCLUDING SOURCE-BASED QUESTIONS

NODIA

Downloaded from www.pdf.tube

UGC NET DISASTER MANAGEMENT
Edition February 2026
Published by :NODIA
An Imprint of NODIA EDITIONS LLP

Information contained in this book has been obtained by author, from sources believes to be reliable. However, neither NODIA nor its author guarantee the accuracy or completeness of any information herein and NODIA nor its author shall be responsible for any error, omissions, or damages arising out of use of this information. This book is published with the understanding that NODIA and its author are supplying information but are not attempting to render engineering or other professional services.

NODIA

© NODIA EDITIONS LLP

MRP Rs 840.00

available at
amazon

This book is available on amazon and flipkart only and not available in market.

NODIA EDITIONS LLP
125, Sector 6, Vidyadhar Nagar, Jaipur 302039
Phone :+91 9024037387
email : mail@nodia.in

CONTENTS

CHAP 01.	Introduction to Disaster Management	19-95
CHAP 02.	Research Methodology for Disaster Management	96-171
CHAP 03.	Legal Framework, Policies and Governance	172-259
CHAP 04.	Society, Development and Disasters	260-343
CHAP 05.	Community Based Disaster Risk Reduction and Disaster Management	344-420
CHAP 06.	Health and Disasters	421-503
CHAP 07.	Environment, Ecology and Climate Change Aspects	504-581
CHAP 08.	Remote Sensing and Geographic Information System	582-657
CHAP 09.	Information and Communications Technology and Other Emerging Technologies	658-746
CHAP 10.	Emergency Response and Management	747-827

****

Click Here to Buy book on Amazon

UNIVERSITY GRANTS COMMISSION NET BUREAU

Subject: Disaster Management **Code No.: 104**

Syllabus

This syllabus contains ten units:

Unit I: Introduction to Disaster Management

Unit II: Research Methodology for Disaster Management

Unit III: Legal Framework, Policies and Governance

Unit IV: Society, Development and Disasters

Unit V: Community Based Disaster Risk Reduction and Disaster Management

Unit VI: Health and Disasters

Unit VII: Environment, Ecology and Climate Change Aspects

Unit VII: Remote Sensing and Geographic Information System

Unit IX: Information & Communications Technology and Other Emerging Technologies

Unit X: Emergency Response and Management

NODIA

Contents:

Unit I: Introduction to Disaster Management

- **Introduction to Disaster Management (DM):**

Key Terms, Definitions and Concepts related to Disaster – Hazard, Risk, Vulnerability, Exposure, Coping Capacity, Resilience, Conflict, Emergencies and related terms; Disaster cycle - Phases of Disaster; Applications of different concepts related to disaster; Methods of hazard, vulnerability and capacity assessment (HVCA)

- **Natural Hazard:**

Classification of Disaster in detail - History of Disasters and Types of Natural Hazards: Earthquakes, Volcanism, Cyclones, Tsunamis, Floods, Droughts, Famines, Landslides, Avalanches and Glacial Lake Outburst Flood; Characteristics, causes and damage potential of different natural hazards

- **Human Induced Disaster:**

Classification of Man-made disasters; Socio-Technical Disaster-Technological Disaster; Chemical, Biological, Radiological and Nuclear Disasters

- **Vulnerability and Risk - Assessment and Management:**

Basics of vulnerability and risk assessment; Concepts of exposure, sensitivity, and adaptive capacity; Analysis of inherent and chronic vulnerabilities; Disaster risk and its associated parameters; Disaster risk mitigation measures; Early warning systems; Common Alert Protocols (CAP)

- **Disaster Management in India:**

Hazard and Vulnerability profile of India; Regional aspects of hazard, risk and vulnerability; Emerging paradigms and recent developments

- - -

Unit II: Research Methodology for Disaster Management

- **Research - Meaning and Concepts:**

Definitions; Sources of knowledge, History of scientific thought, Paradigm of research; Theoretical framework of research; Types of research; Social research, applied research, action research, participatory research; Formulating research problem; Literature review—sources of literatures, importance of literature review, Critical literature review, Identifying gap areas from literature

Downloaded from www.pdf.tube

review; Hypothesis—different types, significance, development of working hypothesis, directional and non-directional hypothesis; Validity & reliability

- **Research Design, Data Collection and Analysis and Methods:**

Research design—Basic principles, need of research design, features of good design, important concepts relating to research design; Laws and theories; Research approaches; Developing a research plan; Determining experimental and sample designs; Types of research methods; Methods, sources or tools for data collection; Construction of questionnaire, interview schedule and interview guide; Sampling—Concepts, types and techniques; Variables; Data processing; Data analysis and statistics; Methods of hypothesis testing; Type of errors; Generalization and interpretation of data

- **Ethical Considerations:**

Ethical issues in research; Identifying and avoiding bias; Academic integrity and prevention of plagiarism; Guidelines in research; Informed consent; Privacy concerns

- **Disaster Research:**

Definitions and concepts in disaster research; Methodology and methods of transdisciplinary research; Methods in contemporary disaster research; Research methods in disaster and humanitarian settings—Qualitative, quantitative, mixed; Qualitative and quantitative approaches to risk assessment and risk reduction; Approaches to qualitative research - Narrative research, Phenomenology, Grounded theory, Ethnography, Autobiography, Case study, Ethnomethodology; Community-based participatory research (CBPR); Research methods for Health emergency and disaster risk management (Health-EDRM); Research methods for natural and environmental disasters; Computational methods for disaster research; Geographical methods for disaster research; Disaster reconnaissance; Ethics and ethical dilemmas in disasters.

NODIA

- - -

Unit III: Legal Framework, Policies and Governance

- **Legal Framework Related to Disasters in India:**

Disaster Management Act, 2005; Other related acts, policies, plans, programmes and legislations

- **International Legal Framework Related to Disasters:**

Major International legal instruments dealing specifically with Disasters; Sendai Framework for DRR 2015-2030; Hyogo Framework for Action 2005-2015; Yokohama Strategy; Sustainable Development Goals (SDGs) and Disaster Risk Reduction (DRR)

- **Policies Related to Disasters:**

National Policy on Disaster Management 2009; National Disaster Management Plan 2019; State Disaster Management Plans (SDMPs); District Disaster Management Plans (DDMPs)

- **Institutional Arrangements in DM:**

National Disaster Management Authority (NDMA), State Disaster Management Authority (SDMA), District Disaster Management Authority (DDMA), National Disaster Response Force (NDRF)

- **Disaster Financial Management:**

Disaster Financial Management Team Composition; Cash flow management, debt monitoring, risk avoidance; Disaster assessment and expense reimbursement pertaining to damage, emergency protective measures; Project and Portfolio Management - performing financial analysis, maintaining accurate financial records and documents in preparation for audits; Supply chain management; Knowledge of Procurement and Contracting Practices; Disaster Financial Management Activities; Disaster Financial Accounting Systems and Management Processes, Disaster Financial Assistance Programs, Financial management for humanitarian response; Disaster Mitigation Fund and Disaster Response Fund at Central and State Levels

Click Here to Buy book on Amazon

- - -

Unit IV: Society, Development and Disasters

- **Disaster Challenges of Vulnerable Population:**

Dimensions and Factors affecting vulnerabilities; Differential vulnerability of people based on caste, class, gender, age, location, disability, religion, etc.; Disaster challenges due to multiple vulnerabilities; Cascading vulnerabilities and impacts; Intersectionality, vulnerability and resilience

- **Gender and Disasters:**

Understanding Sex, Gender and Gendered Vulnerability in Disasters; Gender differentials in disaster cycle, coping strategies and resilience; Gender-Inclusive and Gender-Sensitive DM and their best practices; Women, work and livelihood issue in disasters

- **Children and Disasters:**

Basic Concepts in Child-Centered DRR; Vulnerability of Children in Disasters; Children in disaster cycle, their coping strategies and resilience; Child-Inclusive and Child-Sensitive DM and their best practices

- **Elderly and Disasters:**

Basic Concepts of DRR for elderly population; Vulnerability of elderly in Disasters; Older people in disaster cycle, their coping strategies and resilience; Elderly-Inclusive and Elderly-Sensitive DM and their best practices

- **Disability and Disasters:**

Basic Concepts and Terminologies related to Disability e.g. Impairment, Disability and Handicap, etc.; Convention on the Rights of Persons with Disabilities (CRPD); Rights of Persons with Disabilities Act (2016); Types and Models of Disability; Vulnerability of Persons with Disabilities (PwD); Differential impact of Disasters on PwD; Disability issues in disaster cycle; Coping strategies and resilience of PwD; Disability inclusive DRR (Approaches; Identifying PwD; VCA and Early Warning Systems; Search, Rescue and Evacuation; Shelter Management; Guidelines for Accessibility; Information,

Downloaded from www.pdf.tube

Education and Communication (IEC) material; Rehabilitation); Disability-Sensitive DM and their best practices; Disaster and Emergency Frameworks and their References to Disability; Disability Frameworks and their References to Disasters

- **Development and Disasters:**

Sustainable development; Impact of development projects such as dams, embankments, changes in land-use etc.; Vulnerability to shanty settlements; Vulnerability in the city, Risk in Urban areas, Issues in urban planning, Initiatives for risk reduction in India; Disaster Resilient Infrastructure

- **Indian Knowledge System in Disaster Management:**

Local knowledge and practices for DRR; Indian knowledge about disasters - early warning systems and indicators; coping strategies and disaster response; Distinctive settlement patterns, livelihood preferences, sociocultural practices and traditions; Managing the natural resources and disaster risks; Literary sources about DM; Global best practices and lessons learned.

NODA

- **Economic Aspects of Disasters:**

Identifying the Natural Disasters with Potential Financial Implications; Measuring Local Government Financial Vulnerability to Natural Disasters; Measuring the Financial Capacity of Local Governments to Address Natural Disasters; Identifying Regional Financial Vulnerabilities; Direct and Indirect costs due to disasters; Welfare losses and damages due to disasters; Challenges in making economic assessments of disaster losses

- **Poverty, Livelihood and Disasters:**

Poverty and DRR; Livelihoods and DRR

- - -

Unit V: Community Based Disaster Risk Reduction and Disaster Management

- **Roles of Local Institutions:**

Roles and Responsibilities of Community, Panchayati Raj Institutions/Urban Local Bodies (PRIs/ULBs), Non-Governmental Organizations (NGOs) and other stake-holders in DM

- **Reducing Risk of Disasters in Communities:**

Strategies of Risk reduction; People's participation; Role of civil society and volunteer organizations; Activities and roles of community action for DRR; Participatory risk assessment methods; Culture of safety, prevention, mitigation and preparedness

- **Community Risk Management:**

Community Assets and Social Wealth; Community risk mapping; Living with Risk; Policy Perspectives -Sendai Framework for DRR; Conflict Resolution through Collaboration and Consensus; Citizens Forum, Public Voices and Public Sphere; Social Justice Challenges; Media Advocacy for DM; Building Resilience for Disaster Risk Management; Disaster Literacy of Communities

- - -

Unit VI: Health and Disasters

- **Health Systems and Infrastructure:**

National and Local Health Systems; Tiers of Healthcare Services; Clinical Services; Health Information System; Human Resources for Health; Monitoring and evaluation of health systems; Evaluation of disaster programs and projects; Resilient and Sustainable Health Systems & Infrastructure

- **Disaster Health and Communicable Diseases:**

Concepts of Disaster Health, Endemic, Outbreak, Epidemic and Pandemic; Health Consequences of Disasters; Health-EDRM Framework; Public health preparedness and response; Communicable diseases as public health threats; Principles of communicable disease prevention and control; Major disease in emergency and non-emergency settings; Setting up disease control programmes; Monitoring, evaluation and research for disease control programmes

- **Water, Sanitation and Hygiene in Emergencies:**

Diseases related to water, sanitation and hygiene; Community involvement in hygiene promotion, disease prevention and mitigation; Improving environmental conditions; Water quantity and water quality; Emergency water supply strategy and techniques; Water-borne and water-induced diseases; Vector borne diseases control; Water and sanitation in cholera outbreak response; Hygiene

Click Here to Buy book on Amazon

and Food Safety; Solid waste management; Excreta disposal; Planning guidelines for institutions.

- **Disaster Epidemiology:**

Basic concepts of Epidemiology; Epidemiological triad; Role of the epidemiology in disasters; Methods and methodological challenges in disaster epidemiology; Disaster-related exposures, mortality and morbidity; Health Management Information System (HMIS); Post Disaster Needs Assessment (PDNA); Disaster Registries; Epidemiological Survey; Post-disaster epidemiological investigations/studies; Influenza epidemiology

NODIA

- **Outbreak Investigation and Response:**

Definition and criteria of Outbreak; Steps of an Outbreak Investigation; Prevention of outbreaks; Trigger alerts; Principles and methods of investigations for Food, Water, Air, Vector borne outbreaks

- **Public Health Surveillance:**

Concept and types of surveillance; Indicator & Event based Surveillance; Surveillance - design, evaluation and common problems; Components of Surveillance System; Integrated Disease Surveillance Project (IDSP), Early Warning, Alert and Response System (EWARS)

- **Biological Disasters, Pandemics and Public Health Emergencies:**

Infectious diseases, Biological disasters, Epidemics, Pandemics and Public Health Emergencies – Concepts, Impacts, Prevention, Mitigation, Preparedness, Response, Recovery; Early Warnings and Containment Strategies; DRR and DM measures; Biological hazards – types and risk groups; Biological warfare and Bioterrorism - Threats, Capacity building, Response; Biosafety and Biosecurity; Agrocrime and Agroterrorism; Healthcare waste, biomedical waste and their management; Pandemic – Basics, Stages, Risks, Impacts, Mitigation and Case Studies; International Health Regulations (IHR); Public Health Emergencies of International Concern (PHEIC); Global Health Security Agenda (GHSA); Rapid Response Teams and Capacity Building; Mass vaccination issues

- **Emerging and Re-Emerging Diseases:**

Emerging diseases; Remerging diseases; Factors for emergence of new diseases; Zoonotic diseases; Overview of common emerging and Re-Emerging diseases

- **Mental Health and Psychosocial Support:**

Stressors, protective factors and mental health disorder in emergencies and disasters; Disaster mental health – Basics, Phases, Response, Responders; Normal and abnormal human response to disaster; Post Traumatic Stress Disorder (PTSD); General measures and psychosocial support interventions; Psychological First Aid (PFA), Psychological Debriefings, Cognitive Behavioral Therapy (CBT), Community Based Interventions; Disaster Mental Health Counselling; Managing stress and well-being

- **One Health:**

Basics of One Health Concept, One Health Preparedness, One Health Approach for DM

- **Other Emerging Health Related Issues:**

Risk Assessment and Management in Health Organizations; Health advice for emergency responders; Health in DRR Frameworks; Health related vulnerability and rehabilitation; CBRNe (Chemical, Biological, Radiological, Nuclear and explosive) disasters – Basics, Case studies and Management Strategies; Nutrition and Food Safety, Care of Road Traffic Injuries victims; Minimum Initial Service Package (MISP) for Sexual and Reproductive Health (SRH); Maternal health and safe motherhood; Infant and young child feeding; Antimicrobial Resistance

- - -

Unit VII: Environment, Ecology and Climate Change Aspects

- **Introduction to Environment:**

The global concern; Natural Resources and Energy resources- Renewable and Non-Renewable; Water resources and Forest resources; Biodiversity and conservation, Threats to biodiversity

- **Introduction to Ecology:**

Downloaded from www.pdf.tube

Branches of ecology, Habitat and Ecological niche; Ecosystem - Concepts, types, component, function and structure; Biogeochemical cycles

- **Energy Flow in Ecosystem:**

Law of thermodynamics, flow of energy in an ecosystem; Food chains, Food web; Ecological pyramids; Ecological balance; Community dynamics, hydrosphere, xerosere; Population dynamics - structural and functional aspects of population-death antagonism

NODIA

- **Introduction to Environmental Pollution:**

Sources of pollution; Different types of pollution - Air, water, soil, marine, noise, thermal; Pollution case studies - London smog disaster, Ganga and Yamuna pollution, etc.; Cost of pollution management; Causes of environmental pollution

- **Climate Resilience:**

Climatology - Origin, composition and structure of the atmosphere; Insolation, Distribution of temperature, atmospheric pressure and motion; General atmospheric circulation; Classification of world climates; Koppen's and Thornthwaite's Schemes; Heat Budget; Hydrological Cycle; Climate resilience – meaning, concept, indicators, causes and theories

- **Environmental Health, Safety and Disasters:**

Hailstorms; Heat waves, terminal heat and heat related illness; Cold waves, frost and fog; Climate change - Global warming, Acid rains, Ozone layer depletion; Effect of weather, climate variability and climate change on population health

- **Eco-based Approach and Nature Based Solutions for Disaster Management:**

Ecosystem based Disaster Risk Reduction (EcoDRR) – Introduction, tools and approaches; Natural resources management, traditional environmental wisdom and disasters; Disaster risk management - PEDRR (Partnership for Environment and DRR), Strategic Environmental Assessment (SEA) and its linkages with EcoDRR; Ecological approaches and integrated ecosystem management; Nature Based Solutions (NBSs)

- **Occupational Health and Safety:**

Occupational Hazards – overview, classification, role in different industries; Indian Occupational Safety Scenario; Concept and spectrum of occupational health; Occupational health services – Basics, Structure, Functional units and

Activities; Occupational health screening; Occupational diseases, Notifiable occupational diseases – effects and prevention; Cardio pulmonary resuscitation, audiometric tests, eye tests, vital function tests; Industrial toxicology - local, systemic, chronic, temporary and cumulative effects, carcinogens entry into human systems; Work Related Musculoskeletal Disorders and Ergonomics; Industrial disasters - classification, investigation, and prevention; Agricultural respiratory hazards and diseases; Corporate and office hazards and diseases; Occupational Health, safety and disaster prevention

- **Accident Investigation and Reporting:**

Incident Recall Technique (IRT); Disaster control; Job safety analysis, safety survey, safety inspection, safety sampling; Safety Audit; Concept of an accident, reportable and non-reportable accidents; Unsafe act and condition, Principles of accident prevention; Role of safety committee, Accident causation models, Cost of accident; Overall accident investigation process - Response to accidents, India reporting requirement, Planning document, Planning matrix, Investigators Kit, functions of investigator, four types of evidences, records of accidents, accident reports

- **Fire Disaster Safety:**

Forest Fire, Wild Fire and Fire Following Earthquakes; Vulnerability assessment; Risk Assessment; Mitigation, preparedness and response

- - -

Unit VIII: Remote Sensing and Geographic Information System

- **Basics of Remote Sensing:**

History, Development, Definition, Concept & Principles of Remote Sensing; Electromagnetic Radiation (EMR) and its Characteristics; Wavelength Regions and their Significance; Interaction of EMR with Atmosphere and Earth's Surface - Absorption, Reflectance and Scattering, Atmospheric Windows, Energy Balance Equation, Spectral Response and Spectral Signature, Spectral, Spatial, Temporal and Radiometric resolutions; Concept of satellite, sensor, orbit; Satellite image and various interpretation techniques; Digital image processing techniques

- **Basic Concepts of Geographic Information System (GIS):**

Click Here to Buy book on Amazon

Definition, Philosophy & Historical evolution of GIS; Spatial vs. non-spatial data; Components of GIS, Spatial data models - Raster and Vector; advantages & disadvantages; Raster Data & its Representation - Data Structure & File format, Data Compression (block code, chain code, run length code, quadtree, MrSID); Vector data representation - Data Structure & File format, Topology; Advantage of DBMS in Context of GIS; Data input and projections, Geometric transformation of raster and vector data.

- **DRR Using GIS and RS:**

RS & GIS Global and national initiatives for Disaster Risk Management; Hazard Evaluation and Zonation - Risk and Vulnerability Assessment; Damage assessment - Land use planning and regulation for sustainable development

- - -

Unit IX: Information & Communications Technology and Other Emerging Technologies

- **Introduction to Information & Communications Technology (ICT) and its Applications:**

NODIA

ICT Approaches in DM; Changing Media Environments and the Efficient Use of ICT for Disaster Communication; Disaster Informatics and Multimedia Educational Application for Risk Reduction; Current State and Solutions for Future Challenges in Alerting Technologies; ICT Applications, tools and techniques; Efficient Deployment of ICT Tools; Utilizing ICT Applications for Decision Support in Disaster Mitigation

- **Sensor Technologies and Computing Infrastructure in DRR:**

Introduction to the Sensor Technologies; Types of Sensor Systems, benefits and limitations, efficient use; Design and Deployment practices; Use of Sensor Technologies and Computing Infrastructure for Environmental Risks, Emergency and Rescue Operations

- **Other Emerging Technologies for Disaster Risk Management:**

Big Data, Machine Learning and Database Management; Artificial Intelligence, Unmanned Aerial Vehicles (UAVs), Robotics; Social Media

- - -

NODIA

Unit X: Emergency Response and Management

- **Emergency Response:**

Standard Operation Procedure (SOP) for disaster response; Information Management System; Warning Dissemination; First Responders; Evacuation; Search and Rescue operations; Relief operations; Emergency Operation Center (EOC); Incident Response System – overview, features, Incident Response Teams; Resource Management & Networking - India Disaster Resource Network; Role of Disaster Response Forces and Community Based Organizations (CBO) in emergency response mechanism

- **Emergency Health Services:**

Health in Emergencies; Planning, continuity and access for Emergency Health Services; Prehospital Care - First Aid in different cases, Basic Life Support (BLS), Wound Management, Handling of injured persons; First Aid Triage - Principles, Types, and triage systems; Public Health Emergency Operations Centre (PHEOC) – Framework and key concepts; Mass Casualty Management; Emergency Medical Preparedness and Response; Hospital emergency disaster management plan; Hospital Safety and Preparedness; Health Emergency Teams; Identification and Handling of Human Remains

- **Risk Communication:**

Disaster and Communication - Role of Communication in Disaster, Nature and Scope of Communication; Models and Processes of Communication as Applied to DM; Sender and Receiver Oriented Views; Seven Traditions of Communication and its relevance to DM; Normative Perspective on Disaster Communication, Disaster Warnings as Risk Communication - Risk Perception, Hazard Awareness; Cultural Influences on Risk Communication; Cultural Cognition Theory of Risk Approaches Influencing Hazard Adjustment and Adoption

- **Media and Public Affairs:**

Overview of the Media and Public Affairs; Role of Media in DM and Humanitarian Crisis; Objectives of Mass Media; Ethical Issues in Disaster Communication; Understanding News Media Coverage of Disaster, Biases and Stereotypes; Reporting on Disaster Issues and Challenges, Newsworthiness, Phases of Disaster Reporting, Sources of News, Checklist for Disaster Reporting; Media Relations during Emergency Situations; Alternative Media During Crisis; Tools for Social Media - Applications and Use

- **Shelter and Emergency Settlements:**

Assistance to self-sheltering populations; Emergency Shelter and Intermediate Shelter; Short-term shelter in existing buildings; Site selection and arrangement of emergency settlements; Longer-term issues for emergency settlements; Vector and Pest Control

- **Emergency Support Functions:**

Emergency Support Functions and their details

* * *

Downloaded from www.pdf.tube

NODIA

CHAPTER 01

Introduction to Disaster Management

1. Which of the following terms best defines a process, phenomenon, or human activity that may cause loss of life, injury, property damage, social and economic disruption, or environmental degradation?
(A) Vulnerability
(B) Hazard
(C) Risk
(D) Disaster

2. In the context of disaster management, what does the term 'Exposure' refer to?
(A) Elements in hazard zones that are thereby subject to potential losses.
(B) The inherent strength of a community to resist the impact of a hazard.
(C) The probability of harmful consequences resulting from a specific hazard.
(D) Social and physical characteristics which increase susceptibility to harm.

3. Consider the following statements regarding disaster management concepts:
Statement I : Resilience is the ability of a system, community, or society exposed to hazards to resist, absorb, accommodate, adapt to, transform, and recover from effects in a timely and efficient manner.
Statement II : Coping capacity is the ability of people, organizations, and systems, using available skills and resources, to face and manage adverse conditions, emergencies, or disasters.
Which of the above statements is/are correct?
(A) Only Statement I is correct.
(B) Only Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Neither Statement I nor Statement II is correct.

4. Which phase of the disaster cycle focuses on actions taken to achieve a rapid and effective recovery?
(A) Mitigation
(B) Preparedness
(C) Response
(D) Recovery

5. Which of the following is NOT a primary phase of the disaster cycle?
(A) Preparedness
(B) Response
(C) Assessment
(D) Mitigation

6. The combination of the probability of a hazardous event and its negative consequences is known as:
(A) Hazard
(B) Risk
(C) Vulnerability
(D) Exposure

7. A community has strong social networks, diversified livelihoods, and well-maintained infrastructure. In the context of disaster management, these attributes primarily contribute to its:
(A) Exposure
(B) Hazard level
(C) Risk probability
(D) Resilience

8. Identify the incorrect statement regarding key terms in disaster management.
(A) Risk is the measure of a community's ability to cope with a disaster.
(B) A hazard is a potential source of harm to life or the environment.
(C) Vulnerability is the susceptibility of a community to hazard impacts.
(D) Exposure refers to the elements at risk from a natural or man-made hazard.

Click Here to Buy book on Amazon

9. Match List I with List II and select the correct answer from the codes given below.
List I (Concept):
P. Hazard
Q. Vulnerability
R. Coping Capacity
S. Risk
List II (Description):
1. Susceptibility to damage
2. Potential source of harm
3. Probability x Consequences
4. Means to manage adverse conditions.
(A) P-2, Q-1, R-4, S-3
(B) P-3, Q-4, R-1, S-2
(C) P-2, Q-3, R-4, S-1
(D) P-1, Q-2, R-3, S-4

10. What is the primary purpose of a Hazard, Vulnerability, and Capacity Assessment (HVCA)?
(A) To identify potential hazards and the capacities available to manage them.
(B) To provide immediate humanitarian relief and support to disaster victims.
(C) To legally prosecute individuals responsible for man-made disaster events.
(D) To document the historical record of natural disasters in a specific region.

11. A situation in which there are serious and immediate threats to human life or well-being, often requiring urgent action, is best termed as an:
(A) Conflict
(B) Hazard
(C) Exposure
(D) Emergency

12. **Assertion (A) :** The disaster cycle is a continuous process with distinct but interrelated phases.
Reason (R) : Effective disaster management requires a cyclical approach where lessons from one phase inform the next.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

13. Which of the following is an example of applying the concept of 'coping capacity'?
(A) A city building a new seawall to protect against storm surges.
(B) A government passing a law to restrict construction in a high-risk zone.
(C) A family using their food reserves to survive after a flood disrupts supply.
(D) An insurance company calculating premiums for earthquake damage.

14. Which statement about 'conflict' in the context of disaster management is most accurate?
(A) It is exclusively classified as a man-made hazard event.
(B) It functions as a synonym for any large-scale disaster.
(C) It is defined as a specific phase within the disaster cycle.
(D) It can exacerbate vulnerability and complicate response efforts.

15. Consider the following statements regarding disaster management concepts:
1. All hazards result in disasters.
2. A disaster is the realization of a hazard.
3. Vulnerability is a necessary condition for a hazard to become a disaster.
4. Human activity cannot create hazards, only exacerbate them.
Which of the statements given above are correct?
(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 2 and 3 only
(D) 2, 3 and 4 only

NODIA

16. The detailed classification of disasters includes natural and human-induced categories. Which of the following is correctly classified as a natural hazard?
(A) A major industrial chemical spill.
(B) A large-scale volcanic eruption.
(C) A terrorist attack involving a biological agent.
(D) A dam failure caused by poor maintenance.

17. A sudden and violent shaking of the ground resulting from movements within the earth's crust or volcanic action is known as:
(A) A landslide
(B) An earthquake

(C) A cyclone
(D) A tsunami

18. What is the primary cause of most tsunamis?
(A) Large-scale underwater landslides or earthquakes.
(B) Strong cyclonic winds blowing over the open ocean.
(C) Abnormally high tides due to planetary gravitational pull.
(D) Rapid melting of glaciers near the coastal boundaries.

19. Which of the following is NOT a characteristic typically associated with tropical cyclones?
(A) Strong, rotating winds
(B) An area of calm at the center called the 'eye'
(C) Epicenter located deep within the Earth's crust
(D) Heavy precipitation and storm surge

20. A prolonged period of abnormally low rainfall, leading to a shortage of water, is defined as a:
(A) Famine
(B) Landslide
(C) Flood
(D) Drought

21. **Assertion (A) :** Landslides are more common in hilly or mountainous regions after heavy rainfall.
Reason (R) : Heavy rainfall saturates the soil, increasing its weight and reducing friction, which can lead to slope failure.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

22. A 'famine' is best described as:
(A) A localized food shortage within a specific urban market.
(B) Widespread food scarcity caused by environmental or policy factors.
(C) A natural meteorological phenomenon of extremely low rainfall.
(D) The immediate destruction of agricultural crops following a flood.

23. Which one of the following pairs is incorrectly matched?
(A) Volcanism - Eruption of magma and gases
(B) Avalanche - Rapid flow of snow down a slope
(C) Cyclone - Intense low-pressure system
(D) Tsunami - A type of tropical storm

24. A Glacial Lake Outburst Flood (GLOF) is caused by:
(A) The failure of a dam containing a glacial lake.
(B) A sudden earthquake near a mountain glacier.
(C) Excessive rainfall in a glacial region.
(D) The rapid melting of a glacier causing a river to overflow.

25. Consider the following natural hazards:
1. Earthquake
2. Cyclone
3. Landslide
4. Flood
5. Drought.

Which are considered hydro-meteorological hazards?
(A) 1, 2 and 3
(B) 2, 4 and 5
(C) 1, 3 and 5
(D) 2, 3 and 4

26. The damage potential of an earthquake is primarily dependent on its:
(A) Magnitude, depth, and distance from the populated area.
(B) Time of day and season of the year.
(C) Associated rainfall and wind speed.
(D) Proximity to a large body of water.

27. A Socio-Technical disaster arises from:
(A) The complete failure of a natural environmental system.
(B) A deliberate act of sabotage on a technological system.
(C) An unforeseen and unpreventable act of nature affecting technology.
(D) A combination of technological failure and human or social error.

28. Which of the following is the best example of a technological disaster?

Downloaded from www.pdf.tube

(A) A severe drought impacting agricultural technology.
(B) A nuclear power plant meltdown.
(C) A flash flood in a densely populated urban area.
(D) An earthquake damaging a city's infrastructure.

29. Consider the following events leading to a Glacial Lake Outburst Flood:
1. Failure of the moraine dam
2. Rapid increase in water level
3. Accelerated melting of parent glacier
4. Downstream flooding. Identify the correct chronological sequence.

(A) 2, 3, 1, 4
(B) 3, 2, 1, 4
(C) 1, 2, 3, 4
(D) 3, 1, 2, 4

30. CBRN disasters are a classification of human-induced disasters. What does 'CBRN' stand for?
(A) Critical, Biological, Radioactive, and Nuclear
(B) Civil, Biological, Reactive, and Navigational
(C) Chemical, Bacteriological, Radiological, and Neutron
(D) Chemical, Biological, Radiological, and Nuclear

31. A massive and rapid flow of snow, ice, and rock down a mountainside is known as:
(A) An avalanche
(B) A landslide
(C) A mudflow
(D) A GLOF

32. Which of the following is considered a human-induced disaster?
(A) Volcanic eruption
(B) Industrial gas leak
(C) Tsunami
(D) Cyclone

33. Consider the following statements regarding human-induced disasters:
Statement I : All man-made disasters are intentional.
Statement II : Technological disasters, such as industrial accidents, are often unintentional, resulting from system failures or human error.
Which of the above statements is/are correct?
(A) Only Statement I is correct.
(B) Only Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Neither Statement I nor Statement II is correct.

34. The release of a harmful biological agent, whether accidental or intentional, would be classified as what type of disaster?
(A) Biological
(B) Chemical
(C) Radiological
(D) Nuclear

35. Match List I with List II:
List I:
P. Earthquake
Q. Cyclone
R. Drought
S. Landslide.
List II:
1. Meteorological
2. Geological
3. Climatological
4. Geomorphological.

(A) P-1, Q-2, R-3, S-4
(B) P-2, Q-1, R-3, S-4
(C) P-2, Q-3, R-1, S-4
(D) P-4, Q-1, R-3, S-2

36. A 'Radiological' disaster is characterized by the release of:
(A) Pathogenic microorganisms.
(B) Toxic industrial compounds.
(C) Energy from the splitting or fusing of atomic nuclei.
(D) Harmful radiation from radioactive materials.

37. What distinguishes a 'nuclear' disaster from a 'radiological' disaster?
(A) A radiological disaster is always intentional, whereas a nuclear one is accidental.
(B) A nuclear disaster only occurs in power plants, while a radiological one can happen anywhere.
(C) A nuclear disaster involves a chain reaction, whereas a radiological one involves dispersion of radioactive material.

NODIA

(D) There is no fundamental difference; the terms are interchangeable.

38. Which of the following is an example of a Socio-Technical disaster?
(A) A bridge collapsing due to an earthquake.
(B) A train derailment caused by a combination of track failure and operator error.
(C) A city-wide power outage caused by a severe thunderstorm.
(D) A crop failure due to an unexpected frost.

39. Consider the following statements about human-induced disasters:
1. They include technological and socio-technical categories.
2. CBRN incidents are a major sub-category.
3. Causes are linked to error, negligence, or intent.
4. Impact is always localized.

Which are correct?
(A) 1 and 2 only
(B) 1, 2 and 3 only
(C) 3 and 4 only
(D) All of the above

40. The concept of vulnerability in disaster risk is a function of which of the following components?
(A) Exposure, Sensitivity, and Adaptive Capacity
(B) Hazard, Risk, and Mitigation
(C) Preparedness, Response, and Recovery
(D) Probability, Consequence, and Impact

41. In vulnerability assessment, what does 'Sensitivity' refer to?
(A) The physical presence of people and assets in areas where hazards can occur.
(B) The ability of a system to adjust to hazards, to moderate potential damages, and to cope with the consequences.
(C) The degree to which a system is affected, either adversely or beneficially, by a hazard.
(D) The financial cost of recovering from a disaster event.

42. **Assertion (A) :** High adaptive capacity can reduce a community's overall vulnerability to a hazard.
Reason (R) : Adaptive capacity allows a system to adjust its practices and processes to moderate potential damages or to cope with the consequences of an event.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

43. Which of the following best defines 'Adaptive Capacity'?
(A) The existing level of disaster risk.
(B) The process of physically avoiding a hazard.
(C) The legal framework for disaster response.
(D) The ability of a system to adjust to a hazard to moderate potential damages and cope with consequences.

44. 'Inherent vulnerabilities' are best described as vulnerabilities that:
(A) Arise from the disaster event itself.
(B) Are deeply embedded in the social, economic, and political structures of a community.
(C) Are a result of poor recovery and response efforts.
(D) Are temporary and quickly resolved after a disaster.

45. A 'chronic vulnerability' is one that:
(A) Appears suddenly due to a specific event.
(B) Affects a large population for a short period.
(C) Persists over a long period, making a community constantly susceptible to shocks.
(D) Is related only to technological systems.

46. Which of the following is a key parameter associated with disaster risk?
(A) The date of the last major disaster.
(B) The name of the responding agency.
(C) The color-coding of the warning signal.
(D) The probability of the hazard occurring.

47. Consider the following statements regarding vulnerability and risk assessment:
1. Risk = f(Hazard, Exposure, Vulnerability).
2. Area with zero exposure has high risk.
3. Vulnerability reduced by increasing adaptive capacity.
4. Sensitivity refers to elements in a zone.
5. Assessment is a one-time process.

Click Here to Buy book on Amazon

Which are correct?
(A) 1 and 3 only
(B) 2, 4 and 5
(C) 1, 3 and 4
(D) 2 and 5 only

48. Which of the following is an example of a disaster risk mitigation measure?
(A) Conducting search and rescue operations after an earthquake.
(B) Enforcing building codes to make structures earthquake-resistant.
(C) Distributing food and water in a relief camp.
(D) Documenting the damage for insurance claims.

49. What is the primary function of an Early Warning System (EWS)?
(A) To prevent the occurrence of a natural or man-made hazard.
(B) To assess financial damages after a disaster event has concluded.
(C) To provide timely information that allows people to reduce risk.
(D) To coordinate international humanitarian aid and resource assistance.

50. The Common Alerting Protocol (CAP) is a standard format for:
(A) Calculating disaster risk.
(B) Exchanging all-hazard emergency alerts and public warnings.
(C) Requesting international humanitarian aid.
(D) Reporting the number of casualties in a disaster.

51. A farmer in a drought-prone area switches from a water-intensive crop to a drought-resistant one. This action is an example of improving:
(A) Exposure
(B) Hazard monitoring
(C) Sensitivity
(D) Adaptive capacity

52. The Hazard and Vulnerability profile of India shows that the Himalayan region is highly susceptible to:
(A) Cyclones and Tsunamis
(B) Earthquakes and Landslides
(C) Droughts and Famines
(D) Floods and Storm Surges

53. Which region of India is most vulnerable to tropical cyclones?
(A) The northern Himalayan states.
(B) The central Deccan plateau.
(C) The eastern and western coastal plains.
(D) The Thar desert region.

54. Statement I: A significant portion of India's landmass is prone to earthquakes of moderate to very high intensity.
Statement II : India's long coastline makes it vulnerable to both cyclones and tsunamis.
(A) Only Statement I is correct.
(B) Only Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Neither Statement I nor Statement II is correct.

55. Which of the following is an 'emerging paradigm' in disaster management in India?
(A) A focus solely on post-disaster relief and charitable activity.
(B) A shift from a response-centric to a proactive, holistic approach.
(C) A reliance on traditional methods without incorporating technology.
(D) Management of disasters solely at the national government level.

56. The vulnerability of the Gangetic plains in India is predominantly associated with which hazard?
(A) Earthquakes
(B) Floods
(C) Avalanches
(D) Volcanic eruptions

57. Which of the following does NOT correctly describe a regional aspect of hazard in India?
(A) The Deccan Plateau is relatively stable seismically but is prone to droughts.
(B) The Andaman and Nicobar Islands are vulnerable to tsunamis.
(C) The coastal areas of Andhra Pradesh and Odisha are highly prone to cyclones.
(D) The entire Himalayan belt is classified under the lowest seismic hazard zone.

58. A recent development in India's disaster management approach includes a greater emphasis on:

Downloaded from www.pdf.tube

(A) Community-based disaster management.
(B) International military intervention.
(C) A single, centralized response agency.
(D) Ignoring man-made disasters.

59. The concept of "Resilience" is different from "Coping Capacity" in that resilience includes the ability to:
(A) Simply survive an event.
(B) Use available skills and resources.
(C) Adapt, transform, and improve after a disaster.
(D) Manage adverse conditions temporarily.

60. Consider the following phases of the traditional disaster management cycle:
1. Response
2. Mitigation
3. Recovery
4. Preparedness.

Which is the correct logical sequence?
(A) 2, 4, 1, 3
(B) 4, 1, 3, 2
(C) 1, 3, 2, 4
(D) 2, 1, 4, 3

61. Consider the following statements about disaster risk:
1. Static over time
2. Risk = Hazard x Vulnerability.
3. Zero vulnerability = Zero risk.
4. Reducing exposure reduces risk.

Which are correct?
(A) 1 and 2 only
(B) 2, 3 and 4
(C) 1, 3 and 4
(D) All of the above

62. The overflow of a large amount of water beyond its normal limits, especially over what is normally dry land, is known as:
(A) A drought
(B) A flood
(C) A storm surge
(D) A GLOF

63. Which of the following human activities is LEAST likely to cause a human-induced disaster?
(A) Poorly regulated industrial production.
(B) Sustainable agricultural practices.
(C) Deforestation in a hilly region.
(D) Unplanned urban expansion.

64. What is the cause-effect relationship between volcanism and the global climate?
(A) Volcanic ash and aerosols can trigger short-term global cooling.
(B) Volcanic eruptions lead to immediate increases in global temperature.
(C) Volcanism depletes the ozone layer, increasing harmful solar radiation.
(D) There is no established link between volcanic activity and climate.

65. **Assertion (A) :** Unplanned urbanization can increase a city's vulnerability to flash floods.
Reason (R) : Paving over natural ground with concrete and asphalt reduces water infiltration and increases surface runoff.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

66. A community is located on a seismic fault line but consists of buildings constructed with modern earthquake-resistant technology. Which statement best describes this situation?
(A) High hazard, high vulnerability, high risk.
(B) High hazard, low vulnerability, reduced risk.
(C) Low hazard, high vulnerability, low risk.
(D) Low hazard, low vulnerability, no risk.

67. Which of the following is NOT a primary goal of vulnerability assessment?
(A) To identify which groups or individuals are most vulnerable.
(B) To understand why certain groups are vulnerable.
(C) To determine the exact timing of the next disaster event.
(D) To provide a basis for designing mitigation and preparedness strategies.

68. Match List I with List II:
List I:
P. Biological
Q. Chemical

R. Radiological
S. Nuclear.
List II:
1. Industrial leakage
2. Atomic bomb
3. Pandemic disease
4. Dirty bomb.
(A) P-1, Q-3, R-2, S-4
(B) P-3, Q-1, R-4, S-2
(C) P-3, Q-2, R-1, S-4
(D) P-4, Q-1, R-2, S-3

69. In the context of India's hazard profile, the term 'multi-hazard vulnerability' refers to:
(A) A region being prone to only one specific type of disaster.
(B) A region being susceptible to several different types of natural and man-made hazards.
(C) The entire country having the same level of risk for all disasters.
(D) The vulnerability of multi-story buildings to disasters.

70. The shift from a 'relief-centric' to a 'holistic' approach in disaster management implies:
(A) Integrating disaster risk reduction into development planning.
(B) Focusing only on providing food and shelter after a disaster.
(C) Responding only to large-scale disasters.
(D) Depending solely on international aid for all disaster phases.

71. A sudden release of energy in the Earth's lithosphere that creates seismic waves is the defining characteristic of:
(A) A cyclone
(B) A volcanic eruption
(C) A landslide
(D) An earthquake

72. Consider the following:
1. Cyclones rotate around low pressure.
2. Tsunamis are water displacement waves.
3. Landslides exclusively triggered by earthquakes.
4. Drought is rapid-onset. Which are correct?
(A) 1 and 2 only
(B) 3 and 4 only
(C) 1, 2 and 3 only
(D) 2 and 4 only

73. The difference between an emergency and a disaster is primarily a matter of:
(A) The type of hazard involved.
(B) The capacity of the affected community to cope using its own resources.
(C) The geographical location of the event.
(D) The time of day the event occurs.

74. Which of the following is a component of 'structural mitigation' measures for floods?
(A) Issuing an early warning to the public.
(B) Creating a flood hazard map.
(C) Constructing levees and floodwalls.
(D) Conducting evacuation drills.

75. Consider the following actions:
1. Planning
2. Stockpiling
3. International reconstruction funding
4. Awareness campaigns
5. Building codes.
Which are 'Preparedness' actions?
(A) 1, 2 and 4
(B) 3 and 5
(C) 1, 3 and 4
(D) 2, 4 and 5

76. The term 'damage potential' of a hazard refers to:
(A) The historical record of damage caused by the hazard.
(B) The likely severity and extent of adverse effects that may result from the hazard.
(C) The financial cost of insuring against the hazard.
(D) The ability of a community to withstand the hazard without any damage.

77. Which of the following best describes the relationship between 'drought' and 'famine'?
(A) They are synonymous terms for the same phenomenon.
(B) Drought is a social condition, while famine is a natural one.
(C) Famine is a potential and severe consequence of a prolonged drought.
(D) Famine is a type of drought.

Click Here to Buy book on Amazon

78. What is the fundamental principle behind the Common Alerting Protocol (CAP)?
(A) To provide a standard alert format compatible with multiple technologies.
(B) To create a social media network specifically for disaster warnings.
(C) To rank various nations based on their disaster response capabilities.
(D) To fund scientific research into innovative hazard detection methods.

79. A large number of people in a coastal community depend solely on fishing for their livelihood. This situation increases their _____ vulnerability to a tsunami.
(A) Physical
(B) Social
(C) Economic
(D) Environmental

80. **Assertion (A) :** History of disasters in a region is an important input for hazard assessment.
Reason (R) : Past events provide data on the frequency, magnitude, and impact of hazards, which is crucial for predicting future possibilities.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

81. Which of the following is an example of a 'cascading disaster'?
(A) A single, powerful hurricane making landfall.
(B) A major earthquake that triggers a tsunami, which in turn causes a nuclear power plant failure.
(C) A series of unrelated floods occurring in different parts of a country in the same year.
(D) A slow-onset drought that lasts for several seasons.

82. The 'response' phase of the disaster cycle primarily involves:
(A) Long-term infrastructure rebuilding.
(B) Reducing hazard likelihood.
(C) Immediate assistance to save lives.
(D) Capacity building before events.

83. Which of the following identifies a correct pair of a hazard and its primary characteristic?
(A) Earthquake - Slow onset
(B) Cyclone - Centered around a high-pressure area
(C) Flood - Can be both rapid and slow onset
(D) Drought - Rapid onset with immediate impact

NODIA

84. Arrange the following disaster management paradigms in the correct chronological sequence:
1. Relief/Response
2. Development/Risk Reduction
3. Civil Defense/Protection.
(A) 2, 1, 3
(B) 1, 2, 3
(C) 3, 1, 2
(D) 1, 3, 2

85. Which of these is a key feature of a 'resilient' community?
(A) Complete avoidance of all natural hazards.
(B) The ability to learn from past disasters and adapt to future risks.
(C) Total dependence on external aid for recovery.
(D) A rigid and unchanging social and economic structure.

86. A technological disaster differs from a natural disaster in that its primary origin is:
(A) Linked to the Earth's natural processes.
(B) Related to the failure or malfunction of technology created by humans.
(C) Always predictable with 100% accuracy.
(D) Limited to developing countries.

87. The analysis of inherent and chronic vulnerabilities is crucial for addressing:
(A) The immediate, short-term needs after a disaster.
(B) The root causes of inequality and disaster risk.
(C) The logistics of search and rescue operations.
(D) The technical specifications of early warning sirens.

88. Match the following concepts in List I with the appropriate examples in List II.
List I:
P. Exposure

Q. Sensitivity
R. Adaptive Capacity
S. Vulnerability.
List II:
1. Crop switching
2. Floodplain population
3. Susceptibility of crops
4. Overall susceptibility.
(A) P-2, Q-3, R-1, S-4
(B) P-1, Q-2, R-3, S-4
(C) P-2, Q-1, R-4, S-3
(D) P-4, Q-3, R-1, S-2

89. Which statement correctly identifies an aspect of India's vulnerability to disasters?
(A) India is not vulnerable to tsunamis due to its geographical location.
(B) The entire country falls within a single, uniform seismic zone.
(C) A large part of its arable land is prone to drought.
(D) Landslides are a major hazard only in the coastal regions.

90. The main objective of disaster risk mitigation measures is to:
(A) Increase the intensity of hazards.
(B) Increase the vulnerability of the population.
(C) Reduce the magnitude or likelihood of adverse impacts.
(D) Ensure that disasters occur more frequently.

91. Consider the following statements:
1. Avalanches involve snow.
2. Famines only natural.
3. Volcanism geophysical.
4. Cyclones different names.
5. All floods flash floods.
Which are correct?
(A) 1, 2 and 3
(B) 1, 3 and 4
(C) 2, 4 and 5
(D) 1, 2 and 5

92. Which phase of the disaster management cycle is most closely associated with land-use planning and structural measures?
(A) Response
(B) Recovery
(C) Preparedness
(D) Mitigation

93. A "dirty bomb" is an example of what kind of weapon/disaster?
(A) Nuclear
(B) Biological
(C) Radiological
(D) Chemical

94. Which of the following best describes 'conflict' as a factor in disaster management?
(A) It can act as a trigger for a disaster or as a complicating factor during one.
(B) It is a natural hazard like an earthquake.
(C) It is the final phase of the disaster cycle.
(D) It is a term for a disagreement between relief agencies.

95. In the context of disaster risk assessment, if a very strong earthquake (high hazard) is predicted for a completely uninhabited desert island (zero exposure), the risk to human life is:
(A) Low or negligible
(B) Very high
(C) Moderate
(D) Impossible to determine

96. The "History of Disasters" is studied as part of disaster management primarily to:
(A) Blame past administrations for their failures.
(B) Understand hazard patterns, vulnerability, and learn lessons for the future.
(C) Create a memorial for the victims.
(D) Fulfill a mandatory academic requirement.

97. Which of the following is NOT a natural hazard?
(A) Glacial Lake Outburst Flood (GLOF)
(B) Avalanche
(C) Famine caused by political conflict and food blockades
(D) Volcanism

98. **Assertion (A) :** The adoption of the Common Alerting Protocol (CAP) enhances the effectiveness of early warning systems.
Reason (R) : CAP provides a flexible but structured data format for exchanging alerts, which is not tied to any specific communication technology, allowing for wider and faster dissemination.
(A) Both A and R are true and R is the correct explanation of A.

Downloaded from www.pdf.tube

(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

99. An 'emerging paradigm' in disaster management that emphasizes the role of local people and their knowledge is called:
(A) Top-down management
(B) Command-and-control approach
(C) Community-Based Disaster Management (CBDM)
(D) International-led response

100. Consider the following characteristics:
1. Plate movement
2. Magma eruption
3. Low-pressure system
4. Slope failure.

Which is volcanism?
(A) 1
(B) 2
(C) 3
(D) 4

101. The 'recovery' phase in the disaster cycle can be divided into:
(A) Short-term relief and long-term planning.
(B) Early warning and late warning.
(C) Structural and non-structural measures.
(D) Short-term rehabilitation and long-term reconstruction.

102. Which of the following constitutes an incorrect pairing of a term and its definition?
(A) Resilience - The ability to bounce back and transform.
(B) Hazard - A potentially damaging physical event.
(C) Vulnerability - The probability of a hazard occurring.
(D) Risk - The expected losses from a given hazard to a given element at risk.

103. The western region of India, particularly parts of Rajasthan and Gujarat, has a high vulnerability profile for which specific hazard?
(A) Floods
(B) Drought
(C) Avalanches
(D) GLOFs

104. Statement I: Hazard assessment identifies the nature and severity of threatening events.
Statement II : Capacity assessment identifies available strengths and resources.
(A) Only Statement I is correct.
(B) Only Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Neither Statement I nor Statement II is correct.

105. A fire in a large chemical factory leading to the release of toxic fumes over a populated area is best classified as a:
(A) Natural disaster
(B) Geological disaster
(C) Technological disaster
(D) Meteorological disaster

106. Match the following disaster management phases in List I with the appropriate activities in List II.
List I:
P. Mitigation
Q. Preparedness
R. Response
S. Recovery.
List II:
1. Search and Rescue
2. Zoning
3. Rebuilding
4. Evacuation drills.
(A) P-4, Q-2, R-1, S-3
(B) P-2, Q-4, R-3, S-1
(C) P-2, Q-4, R-1, S-3
(D) P-1, Q-3, R-2, S-4

107. Which of the following hazards has a geological origin?
(A) Cyclone
(B) Tsunami
(C) Flood
(D) Drought

108. The term 'risk mitigation' is most synonymous with:
(A) Risk assessment
(B) Risk reduction
(C) Risk transfer
(D) Risk acceptance

NODIA

109. Which of the following would NOT be considered a component of a community's 'coping capacity'?
(A) Stored food supplies.
(B) Strong kinship ties providing mutual support.
(C) The predicted magnitude of the next earthquake.
(D) Local knowledge of safe evacuation routes.

110. Consider the following statements regarding India's hazard profile:
1. Himalayas (Seismic)
2. Coast (Cyclone)
3. Central (Drought)
4. Gangetic (Flood).

Which are correct?
(A) 1 and 2 only
(B) 1, 2 and 4 only
(C) 3 and 4 only
(D) All of the above

111. The primary difference between a hazard and a disaster is the:
(A) Natural versus man-made origin.
(B) Speed of onset.
(C) Geographical location.
(D) Scale of adverse impact on society.

112. The concept that development can increase disaster risk is a key part of which emerging paradigm?
(A) The relief-centric model.
(B) The understanding of the disaster-development nexus.
(C) The civil defense model.
(D) The command-and-control structure.

113. An epidemic or pandemic is classified under which category of disaster?
(A) Chemical
(B) Radiological
(C) Technological
(D) Biological

114. Arrange the correct sequence of HVCA (Hazard, Vulnerability and Capacity Assessment):
1. Vulnerability
2. Capacity
3. Hazard
4. Risk Analysis.

(A) 1, 2, 3, 4
(B) 3, 1, 2, 4
(C) 4, 3, 1, 2
(D) 2, 1, 4, 3

115. What is the most appropriate description of a 'Socio-Technical' disaster?
(A) A failure originating from the interaction between human/social systems and technological systems.
(B) A disaster caused purely by social unrest.
(C) A natural disaster that affects technological infrastructure.
(D) A disaster caused by a failure in social media technology.

116. **Assertion (A) :** People living in poverty are often disproportionately affected by disasters.
Reason (R) : Poverty is linked to factors such as living in high-risk areas, poor quality housing, and lack of resources for recovery, which constitute high vulnerability.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

117. An effective Early Warning System must have all of the following components EXCEPT:
(A) A sound scientific basis for forecasting the hazard.
(B) A reliable detection and monitoring system.
(C) A guarantee that the hazard will not cause any damage.
(D) An effective communication system to reach the people at risk.

118. Which statement best defines 'vulnerability' in the context of disaster management?
(A) A future event with the potential for negative consequences.
(B) Conditions that increase community susceptibility to hazard impacts.
(C) Ability of a community to withstand disaster without outside help.
(D) Monetary value of property exposed to a potential hazard.

Click Here to Buy book on Amazon

119. A key development in India's disaster management framework has been the shift in focus from post-disaster response to:
(A) International diplomacy
(B) Pre-disaster risk reduction
(C) Historical documentation
(D) Punitive legal action

120. Consider the following pairs:
1. Cyclone (Hydro-met)
2. Earthquake (Geological)
3. Industry (Natural)
4. Epidemic (Biological).
(A) 1 and 2 only
(B) 1, 2 and 4
(C) 3 and 4 only
(D) All of the above

121. The term for a disaster caused by the malicious use of bacteria, viruses, or toxins is:
(A) Chemical warfare
(B) A radiological event
(C) A nuclear attack
(D) Bio-terrorism

122. Which of the following is a key characteristic of a drought?
(A) Rapid onset and short duration.
(B) Caused by excessive rainfall.
(C) Slow onset and prolonged duration.
(D) Limited to coastal areas.

123. The 'damage potential' of a tsunami is most influenced by:
(A) The air temperature at the time of the event.
(B) The topography of the coastline and the height of the waves.
(C) The salinity of the ocean water.
(D) The season in which the tsunami occurs.

124. The main purpose of analyzing 'inherent and chronic vulnerabilities' is to:
(A) Address the root causes of disaster risk embedded in societal systems.
(B) Quickly count the number of damaged buildings after an event.
(C) Test the functionality of early warning sirens.
(D) Provide a list of people who need immediate medical attention.

NODIA

125. Consider the following statements about risk parameters in disaster management:
1. Static.
2. Reduced by lowering vulnerability.
3. Independent of magnitude.
4. Zero if no exposure.
5. Adaptive capacity not a factor.
Which are correct?
(A) 1 and 3
(B) 2 and 4
(C) 1, 3 and 5
(D) 2, 4 and 5

126. A lightning fire spreading because of poor firebreaks and flammable building materials is an example of:
(A) A purely natural disaster.
(B) Interaction between natural hazards and human-induced vulnerability.
(C) A purely technological disaster.
(D) A geological event.

127. The National Disaster Management Authority (NDMA) in India represents a paradigm shift towards a more proactive, holistic, and:
(A) Response-focused approach
(B) Technology-driven approach
(C) Internationally-controlled approach
(D) Charity-based approach

128. What does 'coping capacity' specifically refer to in the disaster context?
(A) The ability to adapt and transform in the long term.
(B) The use of available skills and resources to face and manage an immediate crisis.
(C) The legal framework governing disaster management.
(D) The physical strength of infrastructure.

129. Match the following regions in List I with the most likely natural hazard in List II.
List I:
P. Andaman
Q. Gangetic
R. Deccan
S. Himalayas
List II
1. Flood
2. Drought
3. Seismic

4. Tsunami
(A) P-4, Q-1, R-2, S-3
(B) P-1, Q-4, R-3, S-2
(C) P-4, Q-2, R-1, S-3
(D) P-3, Q-1, R-2, S-4

130. The classification of disasters as 'Natural' and 'Human-induced' is based on their:
(A) Severity
(B) Origin or cause
(C) Duration
(D) Geographical spread

131. Which of the following is NOT a human-induced disaster?
(A) A major oil spill.
(B) The collapse of a poorly constructed building.
(C) A terrorist attack.
(D) A volcanic eruption.

132. **Assertion (A) :** Resilience is a broader concept than coping capacity.
Reason (R) : Resilience includes not only the capacity to cope and recover but also the ability to learn, adapt, and transform in ways that reduce future risk.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

133. The 'eye' of a cyclone is an area of:
(A) Extremely high winds and heavy rain.
(B) Calm weather and light winds.
(C) The highest storm surge.
(D) Intense electrical storms.

134. Which of the following best exemplifies 'adaptive capacity'?
(A) A family having an emergency kit.
(B) A coastal village diversifying its economy to include tourism.
(C) A fire department responding to an emergency call.
(D) A government declaring a state of emergency.

NODIA

135. Consider the following statements about CBRN (Chemical, Biological, Radiological, Nuclear) hazards:
1. Intentional only.
2. Nuclear power plant accident.
3. Bhopal Gas Tragedy.
4. Socio-technical social only.
5. CBRN geological.
Which are correct?
(A) 1 and 4 only
(B) 2 and 4 only
(C) 1, 2 and 4
(D) 2, 4 and 5

136. A GLOF (Glacial Lake Outburst Flood) is a specific type of:
(A) Flash flood
(B) Tsunami
(C) Drought
(D) Cyclone

137. Which of the following is a key element of the 'preparedness' phase of the disaster cycle?
(A) Reconstruction of damaged infrastructure.
(B) Enforcement of building codes.
(C) Conducting evacuation drills and training.
(D) Providing emergency shelter and food.

138. The term 'socio-technical disaster' highlights the role of:
(A) Social media in spreading misinformation.
(B) The failure of social structures to manage technology.
(C) Natural hazards impacting technology.
(D) Technology used for social good.

139. In the context of India's hazard profile, which area is considered to have the highest seismic risk?
(A) The Deccan Trap
(B) The coastal plains of Tamil Nadu
(C) The Himalayan frontal arc and North-Eastern region
(D) The Thar Desert

140. Which of the following is an example of a non-structural mitigation measure against floods?
(A) Building a dam.
(B) Constructing embankments.
(C) Implementing a flood-plain zoning ordinance.

(D) Deepening the river channel.

141. Arrange the correct sequence of events in the formation of a tsunami:
1. Water displacement
2. Wave propagation
3. Sea floor movement
4. Inundation.

(A) 3, 1, 2, 4
(B) 1, 3, 2, 4
(C) 3, 2, 1, 4
(D) 2, 3, 1, 4

142. What is the fundamental difference between a 'radiological dispersal device' (dirty bomb) and a 'nuclear weapon'?
(A) A dirty bomb causes destruction through a nuclear chain reaction, while a nuclear weapon disperses existing radioactive material.
(B) A nuclear weapon causes destruction through a nuclear chain reaction, while a dirty bomb uses conventional explosives to disperse radioactive material.
(C) There is no difference; the terms are used interchangeably.
(D) A dirty bomb uses biological agents, while a nuclear weapon uses radioactive isotopes.

143. Identify the incorrect statement regarding the disaster cycle.
(A) It is a cycle of interconnected activities.
(B) The 'mitigation' phase aims to eliminate or reduce the impacts of hazards.
(C) The 'response' phase focuses on long-term rebuilding and economic recovery.
(D) The 'preparedness' phase focuses on building capacity to respond to an event.

144. 'Sensitivity', as a component of vulnerability, refers to:
(A) The physical location of people and assets in a hazard zone.
(B) The ability of a system to cope with the effects of a hazard.
(C) The degree to which a system will be affected by or responsive to a hazardous event.
(D) The probability of a hazard striking a particular system.

145. Consider the following statements:
1. Natural predictable.
2. History no use.
3. Human exacerbate.
4. Famine is water shortage.
5. Volcanism man-made.

Which is correct?
(A) 1 only
(B) 3 only
(C) 2 and 4
(D) 3 and 5

146. A recent development in disaster management in India is the establishment of a dedicated, professional force for disaster response. This reflects a shift towards:
(A) Increased capacity building for response.
(B) A purely mitigation-focused strategy.
(C) A complete reliance on the army for all disasters.
(D) A reduction in the role of the central government.

147. A large-scale industrial accident, a major transportation crash, or a dam failure are all examples of:
(A) Natural Disasters
(B) Geological Disasters
(C) Technological Disasters
(D) Meteorological Disasters

148. **Assertion (A) :** Community participation is a critical component of effective disaster risk reduction.
Reason (R) : Local communities possess valuable traditional knowledge and are the first responders in any disaster situation, making their involvement essential for sustainable and relevant solutions.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

149. The potential for a landslide is typically increased by:
(A) Prolonged drought and soil compaction.
(B) Intense rainfall and deforestation on steep slopes.
(C) The construction of retaining walls and

Downloaded from www.pdf.tube

good drainage systems.
(D) Flat topography and low-lying terrain.

150. Match the following concepts in List I with the correct descriptions in List II.
List I:
P. Resilience
Q. Risk
R. Hazard
S. Vulnerability.
List II:
1. Hazard (potential)
2. Vulnerability (susceptibility)
3. Risk (probability)
4. Resilience (bounce back).
(A) P-4, Q-3, R-1, S-2
(B) P-3, Q-4, R-2, S-1
(C) P-4, Q-1, R-3, S-2
(D) P-2, Q-3, R-1, S-4

151. Which of the following hazards hazards falls under the classification of 'geophysical' hazards?
(A) Flood
(B) Cyclone
(C) Earthquake
(D) Drought

152. In vulnerability assessment, a household with a single source of income is generally considered more _____ than a household with diversified income sources.
(A) resilient
(B) sensitive
(C) exposed
(D) adaptive

153. What is the relationship between 'conflict' and 'vulnerability'?
(A) Conflict always reduces vulnerability by making people tougher.
(B) Conflict can increase vulnerability by displacing populations and destroying services.
(C) Conflict and vulnerability are unrelated concepts in disaster management.
(D) Vulnerability causes conflict.

154. Statement I: The 'recovery' phase should aim to 'build back better', incorporating risk reduction.
Statement II : The 'recovery' phase is solely about restoring everything exactly as it was.
(A) Only Statement I is correct.
(B) Only Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Neither Statement I nor Statement II is correct.

155. Which of the following is NOT a characteristic of a Glacial Lake Outburst Flood (GLOF)?
(A) It involves the sudden release of a large volume of water.
(B) It is caused by the failure of a moraine or ice dam.
(C) It is a slow-onset phenomenon that develops over many years.
(D) It can cause catastrophic flooding downstream.

NODIA

156. The adoption of the Common Alerting Protocol (CAP) helps overcome which major challenge in early warning?
(A) Lack of scientific knowledge about hazards.
(B) The inability of different warning systems to communicate with each other.
(C) The high cost of satellite monitoring.
(D) Public distrust of government warnings.

157. Which of the following best describes the hazard and vulnerability profile of the peninsular region of India?
(A) High seismic risk and frequent avalanches.
(B) High cyclone risk and frequent GLOFs.
(C) Moderate seismic risk and high vulnerability to droughts and floods.
(D) High risk of volcanism and tsunamis.

158. The concept of 'Disaster Risk' explicitly includes all of the following components EXCEPT:
(A) The nature and magnitude of the hazard.
(B) The exposure of elements to the hazard.
(C) The vulnerability of the exposed elements.
(D) The name of the agency responsible for relief.

159. Consider the following human activities:
1. Construction in floodplain
2. Deforestation
3. Toxic waste release
4. Burning fossil fuels.
Which contribute to hazards/vulnerability?
(A) 1 and 2 only

(B) 3 and 4 only
(C) 1, 2 and 3 only
(D) All of the above

160. An avalanche is best described as a:
(A) Type of flood specific to mountainous areas.
(B) Mass movement of rock and debris.
(C) Rapid flow of a large mass of snow and ice down a slope.
(D) Sudden collapse of a volcanic cone.

161. Which of the following scenarios best demonstrates the application of disaster management concepts?
(A) Using the concept of vulnerability to identify at-risk populations for targeted assistance.
(B) Memorizing the definitions of all key terms without applying them.
(C) Applying the concept of a hazard to create a new one.
(D) Ignoring the disaster cycle in planning processes.

162. **Assertion (A) :** A community with high coping capacity may still be highly vulnerable in the long run if it lacks resilience.
Reason (R) : Coping capacity refers to managing immediate threats with existing resources, whereas resilience involves the ability to adapt, learn, and transform to reduce future risks.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

163. The primary cause of a tropical cyclone is:
(A) The convergence of tectonic plates.
(B) Warm, moist air over tropical oceans rising and creating an area of low pressure.
(C) The gravitational pull of the moon and sun.
(D) Underwater volcanic eruptions.

164. In the context of the disaster cycle, which phase occurs immediately after the disaster strikes?
(A) Mitigation
(B) Preparedness
(C) Response
(D) Recovery

165. Consider the following statements about CBRN (Chemical, Biological, Radiological, Nuclear) hazards:
1. Intentional only.
2. Nuclear power plant accident.
3. Bhopal Gas Tragedy.
4. Socio-technical social only.
5. CBRN geological.
Which are correct?
(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 2 and 3
(D) 2, 4 and 5

166. A "famine," in the context of disasters, is most accurately described as an extreme and widespread scarcity of:
(A) Water
(B) Food
(C) Shelter
(D) Medical supplies

167. Which of the following identifies an incorrect pair?
(A) GLOF - Hydro-meteorological hazard
(B) Volcanism - Geophysical hazard
(C) Famine - Socio-economic / Climatological hazard
(D) Avalanche - Man-made hazard

168. The proactive and forward-looking approach in disaster management is best exemplified by the:
(A) Response phase
(B) Recovery phase
(C) Mitigation phase
(D) Emergency phase

169. Match the following in List I with the correct descriptions in List II.
List I:
P. EWS
Q. HVCA
R. CAP
S. Mitigation.
List II:
1. CAP (Alert standard)
2. Mitigation (Risk reduction)
3. EWS (Early Warning)
4. HVCA (Assessment).
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-1, S-2

Click Here to Buy book on Amazon

(C) P-3, Q-1, R-4, S-2
(D) P-2, Q-4, R-1, S-3

170. 'Chronic vulnerabilities' are those that:
(A) Arise suddenly and are short-lived.
(B) Are related to the immediate physical impact of a hazard.
(C) Are long-term, persistent factors like poverty and marginalization.
(D) Affect only technological systems.

171. The damage potential of a flood is NOT directly related to:
(A) The depth and velocity of the water.
(B) The duration of the inundation.
(C) The land use in the flooded area.
(D) The seismic magnitude of the region.

172. The shift from a top-down, government-centric approach to one that involves NGOs, community groups, and the private sector is an 'emerging paradigm' in:
(A) Collaborative governance for disaster management.
(B) Creating more bureaucracy.
(C) Reducing the government's responsibility.
(D) Making disaster response slower.

173. What is the cause-and-effect relationship between deforestation and landslides?
(A) Deforestation decreases slope weight, improving stability.
(B) Removing root systems increases erosion and instability.
(C) Landslides act as a primary driver of deforestation.
(D) There is no established link between these two factors.

174. Which of the following is NOT a phase of the disaster management cycle?
(A) Mitigation
(B) Preparedness
(C) Recovery
(D) Litigation

175. Consider the following activities:
1. Search & Rescue (S&R)
2. Family plan
3. Building codes
4. Counseling.

Which of the above correctly represent Response and Recovery activities?
(A) 1 (Response), 4 (Recovery)
(B) 2 (Response), 3 (Recovery)
(C) 1 (Response), 2 (Recovery)
(D) 3 (Response), 4 (Recovery)

176. Which of the following best describes the risk faced by a well-prepared community living near an active volcano?
(A) The risk is reduced compared to an unprepared community in the same location.
(B) The risk is high because the hazard is high.
(C) The risk is zero because the community is well-prepared.
(D) The risk is determined only by the volcano's past eruption history.

177. An 'emergency' becomes a 'disaster' when:
(A) The event is reported in the international media.
(B) The President or Prime Minister makes a formal declaration.
(C) The community's capacity to cope is overwhelmed, requiring external assistance.
(D) The event involves a natural, rather than man-made, hazard.

NODIA

178. What does "N" in CBRN stand for?
(A) Natural
(B) Nuclear
(C) Navigational
(D) Noxious

179. **Assertion (A) :** The hazard and vulnerability profile of India is diverse and varies significantly by region.
Reason (R) : India's unique geo-climatic conditions and large population result in different parts of the country being prone to different hazards.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

180. The primary purpose of HVCA (Hazard, Vulnerability, and Capacity Assessment) is to:

(A) Provide a factual basis for designing disaster risk reduction strategies.
(B) Punish those responsible for past disasters.
(C) Calculate the exact financial cost of the next disaster.
(D) Distribute relief supplies after an event.

181. A key characteristic of 'volcanism' as a hazard is the release of:
(A) Only seismic energy.
(B) Molten rock (lava), ash, and gases.
(C) Only floodwaters.
(D) Extremely cold air masses.

182. Which statement accurately describes a recent development in disaster management?
(A) A move away from using technology in early warning systems.
(B) A greater emphasis on integrating climate change adaptation with disaster risk reduction.
(C) A focus only on national-level planning, ignoring local contexts.
(D) A return to a purely relief-based approach.

183. Identify the correct statement about natural hazards.
(A) They are always rapid-onset events.
(B) Human actions cannot influence their frequency or intensity.
(C) They are natural processes that become hazardous when they interact with human systems.
(D) They are completely random and cannot be studied or forecast.

184. A major train derailment due to a combination of signal failure and driver error is an example of a:
(A) Natural Disaster
(B) Socio-Technical Disaster
(C) Geological Disaster
(D) Climatic Disaster

185. Consider the following statements about Vulnerability:
1. Static.
2. Determined by physical/social/economic.
3. Economy reduces.
4. Independent of hazard type.

Which are correct?
(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 2 and 3
(D) All of the above

186. The concept of 'exposure' in disaster risk assessment refers to:
(A) The strength and resilience of a community.
(B) The presence of people, livelihoods, and infrastructure in hazard-prone areas.
(C) The history of past disasters in a region.
(D) The legal framework for disaster response.

187. The 'recovery' phase of the disaster cycle is distinct from the 'response' phase because it focuses on:
(A) Immediate life-saving actions.
(B) Long-term restoration of services, infrastructure, and community life.
(C) Issuing warnings and evacuating people.
(D) Assessing the initial damage.

188. Which of these is a characteristic of a Tsunami?
(A) It is a single, massive wave.
(B) It is caused by strong winds during a hurricane.
(C) It is a series of waves with a very long wavelength.
(D) It travels very slowly in the deep ocean.

189. Which of the following is NOT a man-made disaster?
(A) Building collapse due to faulty construction.
(B) A chemical spill from a factory.
(C) A landslide triggered by an earthquake.
(D) A fire caused by an electrical short-circuit.

190. Match the following hazards in List I with their correct descriptions in List II.
List I:
P. Landslide
Q. Drought
R. Cyclone
S. Earthquake.
List II:
1. Cyclone (Tropical storm)
2. Earthquake (Seismic)
3. Landslide (Slope failure)
4. Drought (Water shortage).
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-1, S-2

Downloaded from www.pdf.tube

(C) P-3, Q-1, R-4, S-2
(D) P-2, Q-4, R-1, S-3

191. The term "resilience" in disaster management implies more than just surviving; it emphasizes the ability to:
(A) Prevent any disaster from ever happening.
(B) Rely completely on outside assistance.
(C) Adapt, learn, and transform to a less vulnerable state.
(D) Restore conditions to exactly what they were before the disaster.

192. Which of the following is the most appropriate example of disaster mitigation?
(A) Distributing blankets in a relief camp.
(B) Retrofitting a hospital to withstand earthquakes.
(C) Conducting a search and rescue operation.
(D) Setting up a temporary shelter.

193. The primary difference between a 'chemical' and a 'biological' disaster is:
(A) The involvement of a toxic substance versus a living organism or its toxins.
(B) The speed of onset.
(C) The scale of the impact area.
(D) Whether it is accidental or intentional.

194. Sequence from most rapid onset to most slow onset:
1. Drought
2. Earthquake
3. Famine.
(A) 1, 2, 3
(B) 2, 1, 3
(C) 2, 3, 1
(D) 3, 1, 2

195. Consider the following statements:
1. Risk eliminated.
2. Exposure = Risk.
3. Adaptive capacity is adjusting.
4. CAP is satellite.
5. Inherent vulnerabilities easy.
Which is correct?
(A) 3 only
(B) 1 and 2
(C) 3 and 4
(D) 5 only

196. An emerging paradigm in disaster management in India is the creation of legal and institutional frameworks, which signifies a shift towards a more:
(A) Ad-hoc and reactive system.
(B) Formalized, systematic, and accountable system.
(C) Charity-based and voluntary system.
(D) Internationally dependent system.

197. The term 'famine' is typically associated with all the following EXCEPT:
(A) Widespread food scarcity.
(B) Malnutrition and starvation.
(C) Increased mortality rates.
(D) A sudden, single-day event.

198. **Assertion (A) :** The classification of disasters is important for effective management.
Reason (R) : Different types of disasters require different expertise, equipment, and response strategies.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

199. A situation where an armed conflict prevents humanitarian aid from reaching a population affected by a drought is an example of:
(A) A complex emergency
(B) A simple natural disaster.
(C) A technological disaster.
(D) A geological event.

NODIA

200. The concept of 'sensitivity' is part of the broader analysis of:
(A) Hazard
(B) Vulnerability
(C) Coping Capacity
(D) Risk Mitigation

201. Which one of the following is NOT a component of an effective early warning system?
(A) Risk Knowledge
(B) Monitoring and Warning Service
(C) Post-disaster reconstruction
(D) Dissemination and Communication

202. Statement I: India's eastern coast is more prone to cyclones than its western coast.
Statement II : The Bay of Bengal experiences conditions more favourable for the formation of cyclones than the Arabian Sea.
(A) Only Statement I is correct.
(B) Only Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Neither Statement I nor Statement II is correct.

203. Which of the following is the best example of 'inherent vulnerability'?
(A) A building being damaged by a specific earthquake.
(B) A social system where certain groups are excluded from decision-making.
(C) A temporary power outage after a storm.
(D) A bridge being closed for repairs.

204. The analysis of the 'History of Disasters' is useful for all of the following EXCEPT:
(A) Identifying patterns of hazard occurrence.
(B) Understanding how vulnerabilities have evolved.
(C) Learning from past response and recovery successes and failures.
(D) Guaranteeing that past events will repeat in exactly the same way.

205. Consider the following pairs:
1. Himalayas (Avalanche)
2. Andhra (Cyclone)
3. Rajasthan (Flood)
4. Deccan (Drought).
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2 and 4
(D) All of the above

206. The main objective of the 'response' phase is to:
(A) Prevent the disaster from occurring.
(B) Provide immediate assistance to save lives and meet basic needs.
(C) Rebuild the economy and infrastructure over the long term.
(D) Develop plans for future disasters.

207. Which of the following is a key characteristic of an avalanche?
(A) It involves the rapid movement of snow, ice, and debris.
(B) It is a hydro-meteorological phenomenon.
(C) It is primarily a coastal hazard.
(D) It is a slow-onset disaster.

208. Match the hazards in List I with their correct classifications in List II.
List I:
P. Earthquake
Q. Cyclone
R. Flood
S. Drought.
List II:
1. Cyclone (Meteorological)
2. Earthquake (Geological)
3. Drought (Climatological)
4. Flood (Hydrological).
(A) P-2, Q-1, R-4, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-2, Q-3, R-1, S-4
(D) P-4, Q-1, R-2, S-3

209. The term 'resilience' is often preferred over 'vulnerability reduction' because it:
(A) Focuses only on the negative aspects of a community.
(B) Emphasizes the strengths and capacities of a community to adapt and transform.
(C) Is a much simpler concept to measure.
(D) Ignores the role of hazards in causing disasters.

210. A nuclear disaster, such as the one at Chernobyl, is classified as:
(A) A geological disaster
(B) A human-induced technological disaster
(C) A natural disaster
(D) A biological disaster

211. Consider the following conceptual definitions:
1. Hazard (potential)
2. Risk (realization)
3. Vulnerability (susceptibility)
4. Exposure (location).
Which are correct?
(A) 1 and 2 only
(B) 1, 3 and 4 only
(C) 2 and 4 only
(D) All of the above

Click Here to Buy book on Amazon

212. The concept of 'building back better' is most relevant to which phase of the disaster management cycle?
(A) Preparedness
(B) Mitigation
(C) Response
(D) Recovery

213. Which of these is a human-induced cause that can significantly worsen flood impacts?
(A) High seasonal rainfall.
(B) Encroachment on river floodplains and destruction of wetlands.
(C) The natural meandering of a river.
(D) The presence of a steep river gradient.

214. The primary goal of a disaster risk mitigation measure is to:
(A) Document the lessons learned after a disaster.
(B) Lessen the potential adverse effects of a hazard.
(C) Provide immediate medical assistance during a disaster.
(D) Predict the exact time and location of the next disaster.

215. Consider the following components:
1. Hazard
2. Exposure
3. Sensitivity
4. Adaptive Capacity.

Which three determine 'vulnerability'?
(A) 1, 2, and 3
(B) 1, 3, and 4
(C) 2, 3, and 4
(D) 1, 2, and 4

216. Which of the following is NOT an objective of a capacity assessment?
(A) To identify a community's strengths and resources.
(B) To understand existing coping mechanisms.
(C) To identify the potential magnitude and frequency of hazards.
(D) To assess the human, material, and financial resources available for risk reduction.

217. In India, the increasing focus on a 'culture of prevention' is an example of an emerging paradigm. This signifies a shift towards:
(A) Relying solely on post-disaster response.
(B) Mainstreaming disaster risk reduction into the public consciousness.
(C) Blaming victims for their losses.
(D) Ignoring small-scale, recurrent disasters.

218. A 'famine' can be triggered by a drought, but its severity is often exacerbated by:
(A) High levels of food security and government support.
(B) Political instability, conflict, and poor governance.
(C) Abundant rainfall in the preceding years.
(D) Strong local markets and transportation networks.

219. **Assertion (A) :** Early Warning Systems are considered a critical component of disaster risk reduction.
Reason (R) : Timely warnings allow people and communities to take actions to protect themselves, thereby reducing the impacts of a hazard.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

220. The key difference between a landslide and an avalanche is:
(A) Landslides occur on mountains, while avalanches occur on flat ground.
(B) Landslides involve rock and soil, while avalanches primarily involve snow and ice.
(C) Landslides are slow, while avalanches are rapid.
(D) Avalanches are man-made, while landslides are natural.

221. A scenario where a failure in the electrical grid leads to a breakdown of communication which hampers hospital services is an example of a:
(A) Natural disaster
(B) Socio-technical disaster
(C) Geological disaster
(D) Biological disaster

Downloaded from www.pdf.tube

222. The term that encompasses the actions taken during and immediately after a disaster to save lives and meet urgent needs is:
(A) Mitigation
(B) Preparedness
(C) Response
(D) Recovery

223. What is the most significant characteristic of a 'disaster'?
(A) It is always a natural phenomenon.
(B) It causes an insignificant amount of damage.
(C) Disruption severe enough to overwhelm a community's capacity.
(D) It only happens in developing countries.

224. Consider the following statements about India's hazard profile:
1. Uniform flood risk.
2. Himalayas prone to landslides.
3. Coast not at tsunami risk.
4. North-East high seismic zone.

Which are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2 and 4
(D) All of the above

225. Consider the following statements:
1. Resilience is coping.
2. Exposure is susceptibility.
3. Risk is probability.
4. Hazard is dangerous phenomenon.
5. Vulnerability reduced by adaptive capacity.

Which are correct?
(A) 1, 2 and 3
(B) 3, 4 and 5
(C) 1, 3 and 4
(D) 2, 4 and 5

226. Which type of disaster is specifically related to the failure of a dam holding back a lake at the front of a glacier?
(A) Tsunami
(B) Glacial Lake Outburst Flood (GLOF)
(C) Avalanche
(D) Flash Flood from rainfall

227. The primary aim of studying the 'History of Disasters' is to:
(A) Memorize dates and death tolls.
(B) Understand the context and patterns to inform future practice.
(C) Assign blame for past failures in disaster response.
(D) Create a dramatic narrative of human suffering.

228. Which of the following does NOT fall under the category of a human-induced disaster?
(A) A major industrial fire.
(B) A building collapse due to structural flaws.
(C) A severe drought affecting a region.
(D) An act of bio-terrorism.

NODIA

229. Match the activities in List I with the appropriate disaster management phase in List II.
List I:
P. Drill
Q. Relief food
R. Building laws
S. School reconstruction.
List II:
1. Mitigation (Laws)
2. Preparedness (Drill)
3. Response (Relief)
4. Recovery (Reconstruction).
(A) P-2, Q-3, R-1, S-4
(B) P-1, Q-2, R-3, S-4
(C) P-2, Q-1, R-3, S-4
(D) P-3, Q-2, R-4, S-1

230. A community's ability to use its own available skills and resources to manage adverse conditions during a crisis is called:
(A) Resilience
(B) Vulnerability
(C) Coping Capacity
(D) Exposure

231. The Indian Tsunami Early Warning System (ITEWS) was established following which major disaster?
(A) The 1999 Odisha Supercyclone
(B) The 2001 Bhuj Earthquake
(C) The 2004 Indian Ocean Tsunami
(D) The 2013 Uttarakhand Floods

232. An old, poorly maintained building in a seismically active zone represents a high level of which component of risk?
(A) Hazard

(B) Vulnerability
(C) Capacity
(D) Resilience

233. The 'eye' of a cyclone is an area of:
(A) Extremely high winds and heavy rain.
(B) Calm weather and light winds.
(C) The highest storm surge.
(D) Intense electrical storms.

234. Statement I: All natural hazards can be prevented by human intervention.
Statement II : The risk associated with natural hazards can be mitigated by reducing vulnerability and exposure.
(A) Only Statement I is correct.
(B) Only Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Neither Statement I nor Statement II is correct.

235. The classification of disasters into Chemical, Biological, Radiological, and Nuclear (CBRN) is a sub-classification of:
(A) Natural Disasters
(B) Human-Induced Disasters
(C) Geological Disasters
(D) Meteorological Disasters

236. The term 'resilience' in the context of disaster management primarily focuses on a system's ability to:
(A) Resist, absorb, recover from, and adapt to the effects of a hazard.
(B) Prevent any hazard from occurring.
(C) Predict the exact moment a disaster will strike.
(D) Depend entirely on external aid for survival.

237. Which of these is an example of chronic vulnerability?
(A) A bridge being washed away in a flood.
(B) A community's long-term lack of access to healthcare and education.
(C) A power outage lasting for a few hours.
(D) The immediate need for search and rescue after an earthquake.

238. **Assertion (A) :** The disaster management paradigm in India has shifted from being relief-centric to a more holistic one.
Reason (R) : This shift involves integrating disaster risk reduction into development planning and emphasizing preparedness and mitigation.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

239. The most fundamental cause of an earthquake is:
(A) Heavy rainfall
(B) The sudden release of stress along faults in the Earth's crust.
(C) The high tide of the ocean.
(D) Strong cyclonic winds.

240. An Early Warning System (EWS) is considered a measure for:
(A) Mitigation
(B) Preparedness
(C) Response
(D) Recovery

241. Consider the following statements about Risk:
1. Directly proportional to hazard.
2. Directly proportional to vulnerability.
3. Inversely proportional to coping capacity.
4. Exists with zero exposure.

Which are correct?
(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 2 and 3
(D) All of the above

242. A pandemic like COVID-19 falls under which classification of disaster?
(A) Chemical
(B) Radiological
(C) Biological
(D) Nuclear

243. The process of identifying the probability and potential impact of different hazards is known as:
(A) Capacity assessment

Click Here to Buy book on Amazon

(B) Vulnerability assessment
(C) Hazard assessment
(D) Recovery planning

244. The gradual, long-term process of helping a community return to a state of normalcy after a disaster is known as:
(A) Response
(B) Preparedness
(C) Mitigation
(D) Recovery

245. Consider the following categories of hazards:
1. Geological
2. Hydro-met
3. Biological
4. Technological
5. Extra-terrestrial.

Which are natural?
(A) 1 and 2 only
(B) 1, 2 and 3 only
(C) 1, 2, 3 and 5
(D) All of the above

246. Which statement best differentiates 'hazard' and 'risk'?
(A) A hazard is the damaging event itself, while risk is the potential for that event.
(B) A hazard is the potential for harm, while risk is the probability of harm occurring.
(C) Hazard and risk are interchangeable terms.
(D) A hazard is man-made, while a risk is natural.

247. The Common Alerting Protocol (CAP) is designed to be:
(A) A proprietary software for a single government agency.
(B) An open, non-proprietary standard for exchanging public warnings.
(C) A new type of radio communication system.
(D) A method for assessing building damage.

248. The vulnerability of India's vast agricultural sector is most directly linked to which recurring natural hazard?
(A) Tsunamis
(B) Avalanches
(C) Droughts and Floods
(D) Volcanic eruptions

249. Which of the following is NOT a characteristic cause of a human-induced disaster?
(A) Human error or negligence
(B) Tectonic plate movement
(C) Failure of a safety system
(D) Malicious intent or sabotage

250. Match the regions in List I with their characteristic hazards in List II.
List I:
P. North-East
Q. Odisha
R. Central Maharashtra
S. Lahaul-Spiti.
List II:
1. Odisha (Cyclone)
2. Maharashtra (Drought)
3. Lahaul-Spiti (Avalanche)
4. North-East (High Seismic).
(A) P-4, Q-1, R-2, S-3
(B) P-1, Q-4, R-3, S-2
(C) P-4, Q-2, R-1, S-3
(D) P-3, Q-1, R-2, S-4

Direction : Please read the following source carefully.

The foundational lexicon of disaster management hinges upon a precise understanding of several interconnected concepts. A 'hazard' is defined as a process, phenomenon, or human activity that may cause loss of life, injury, health impacts, property damage, or environmental degradation. It represents a potential threat. 'Vulnerability', in contrast, refers to the conditions determined by physical, social, economic, and environmental factors which increase the susceptibility of an individual, a community, or a system to the impacts of hazards. 'Exposure' pertains to the people, property, systems, or other elements present in hazard zones that are thereby subject to potential losses. The concept of 'risk' is a synthesis of these, often conceptualized as the probability of harmful consequences resulting from interactions between hazards and vulnerable conditions. 'Coping capacity' is the ability of people and systems to face and manage adverse conditions using available skills and resources. Extending beyond mere coping, 'resilience' is the capacity of a system or community exposed to hazards to resist, absorb, accommodate, adapt to, transform, and recover from the effects of a hazard in a

NODIA

timely and efficient manner. Differentiating from routine incidents, an 'emergency' is an event that can be managed using a community's existing resources, whereas a disaster overwhelms this capacity, necessitating external assistance.

Based on the above source, attempt the following five questions.

251. Which of the following statements best differentiates between a hazard and a risk?
(A) A hazard is the actual occurrence of a disaster, while risk is the potential for a disaster.
(B) A hazard is a potential source of harm, while risk is the likelihood of harm occurring due to that hazard interacting with vulnerability.
(C) A hazard is always a natural phenomenon, whereas risk is associated with human activities.
(D) A hazard is quantifiable in economic terms, while risk is a qualitative assessment of susceptibility.

252. According to the provided text, what is the primary factor that distinguishes an 'emergency' from a 'disaster'?
(A) The capacity of the affected community to manage the event with its own resources.
(B) The geographical scale of the affected area.
(C) The duration of the adverse event.
(D) The type of hazard, whether natural or human-induced.

253. The concept of 'resilience' as described in the paragraph extends beyond 'coping capacity' by emphasizing:
(A) The immediate use of available skills and resources to face adversity.
(B) The pre-existing conditions that make a community susceptible to harm.
(C) The ability to adapt, transform, and recover efficiently post-hazard.
(D) The presence of people and property within a designated hazard zone.

254. A coastal community has a well-developed fishing industry (people, boats, infrastructure) situated in an area historically prone to cyclones. In the context of disaster management terminology, the people and their assets primarily represent:
(A) Vulnerability
(B) Resilience
(C) Coping Capacity
(D) Exposure

255. Based on the interrelationships described, disaster risk can be understood as a function of which combination of factors?
(A) Resilience, Coping Capacity, and Emergency.
(B) Hazard, Resilience, and Risk.
(C) Hazard, Vulnerability, and Exposure.
(D) Vulnerability, Emergency, and Coping Capacity.

Direction : Please read the following source carefully.

The management of disasters is conceptualized through a dynamic and continuous process known as the 'disaster cycle'. This cycle is not a linear progression but a framework illustrating the ongoing phases of action taken to address disasters. It is broadly divided into pre-disaster, during-disaster, and post-disaster phases. The pre-disaster phase is proactive and focuses on reducing future risks. It encompasses 'mitigation' activities, which are long-term measures aimed at eliminating or reducing the impact and risk of hazards, such as constructing flood levees or enforcing building codes. It also includes 'preparedness', which involves planning, training, and educational activities to ensure an effective response when a disaster does occur, like developing evacuation plans and conducting drills. The during-disaster phase consists solely of the 'response' activities, which are immediate actions taken to save lives, meet basic human needs, and reduce property damage during or immediately after a disaster. The post-disaster phase is focused on recovery and includes 'recovery' and 'reconstruction' efforts. This phase aims to restore and improve the community's conditions, moving beyond simple restoration to "build back better" by integrating mitigation measures into the reconstruction process, thereby enhancing resilience and reducing future vulnerabilities. The application of concepts like vulnerability assessment is crucial in the mitigation phase, while coping capacity is a key determinant of success during the response phase.

Based on the above source, attempt the following

Downloaded from www.pdf.tube

five questions.

256. Which phase of the disaster cycle is primarily concerned with long-term measures to lessen the potential impact of hazards before they occur?
(A) Response
(B) Mitigation
(C) Recovery
(D) Preparedness

257. According to the paragraph, the application of vulnerability assessment is most critical for informing activities within which phase?
(A) The response phase, to identify who needs immediate help.
(B) The recovery phase, to calculate the total economic loss.
(C) The preparedness phase, to design short-term drills.
(D) The mitigation phase, to guide long-term risk reduction measures.

258. The principle of "building back better" is most directly associated with which component of the post-disaster phase?
(A) The reconstruction efforts that integrate risk reduction.
(B) The immediate response actions to save lives.
(C) The initial damage assessment during the response.
(D) The development of early warning systems in preparedness.

259. Which of the following activities best exemplifies the 'preparedness' phase of the disaster cycle?
(A) Constructing earthquake-resistant buildings.
(B) Providing emergency medical aid to the injured.
(C) Conducting community-wide evacuation drills.
(D) Clearing debris and restoring essential services.

260. The paragraph suggests that the disaster cycle is a continuous process because:
(A) The end of one phase, particularly recovery, informs the beginning of the next mitigation phase.
(B) The response phase is the only phase that matters.
(C) Disasters happen with predictable regularity.
(D) Each phase is managed by separate and independent agencies.

Direction : Please read the following source carefully.

A critical methodological tool in contemporary disaster management is the Hazard, Vulnerability, and Capacity Assessment (HVCA). This systematic approach moves beyond a singular focus on hazards to provide a holistic understanding of disaster risk at the community level. The process involves three distinct but interrelated analytical components. First, hazard assessment identifies and analyzes the potential threats to a community, characterizing their nature, intensity, frequency, and geographical extent. Second, vulnerability assessment scrutinizes the conditions of susceptibility within the community. It examines the physical, social, economic, and environmental factors that make people and their assets prone to damage from the identified hazards. This includes analyzing factors like poverty, social marginalization, poor housing quality, and lack of access to resources. The third component, capacity assessment, takes a positive-oriented approach by identifying the strengths, resources, and coping mechanisms that exist within the community. This involves evaluating the skills, knowledge, social networks, and institutional support systems that people can mobilize to withstand, prepare for, and recover from a disaster. By integrating the findings from these three assessments, HVCA provides a comprehensive risk profile that enables decision-makers to prioritize actions, allocate resources effectively, and design targeted risk reduction strategies that are tailored to the specific context of the community.

Based on the above source, attempt the following five questions.

261. What is the primary objective of conducting a Hazard, Vulnerability, and Capacity Assessment (HVCA)?
(A) To focus exclusively on the physical characteristics of potential hazards.
(B) To document the history of past disasters in a specific region.

NODIA

(C) To allocate international aid after a disaster has occurred.
(D) To provide a comprehensive understanding of disaster risk by integrating analyses of threats, susceptibilities, and strengths.

262. Which component of the HVCA process is specifically described as being 'positive-oriented'?
(A) Hazard assessment, because it identifies potential threats.
(B) Capacity assessment, because it focuses on existing strengths and resources.
(C) Vulnerability assessment, because it highlights areas for improvement.
(D) The integration of all three components into a final report.

263. According to the text, a vulnerability assessment would most likely analyze which of the following?
(A) The frequency and intensity of potential cyclones in a region.
(B) The existence of community-led early warning teams.
(C) The prevalence of poorly constructed housing in low-income neighborhoods.
(D) The geological characteristics of fault lines in an area.

264. The paragraph implies that the main advantage of the HVCA methodology over older approaches is its:
(A) Sole focus on the economic impacts of disasters.
(B) Ability to be conducted rapidly with minimal resources.
(C) Emphasis on post-disaster response and recovery.
(D) Holistic nature, which moves beyond a simple hazard-centric view.

265. If a community has strong social networks and a local team trained in first aid, these would be identified and evaluated during which part of the HVCA?
(A) Capacity assessment
(B) Hazard assessment
(C) Vulnerability assessment
(D) Risk integration

Direction : Please read the following source carefully.

The classification of disasters provides a systematic framework for understanding their origins and characteristics. A primary distinction is made between natural hazards and human-induced disasters. Natural hazards originate from natural processes in the environment and can be broadly categorized. One major category includes geological hazards such as earthquakes, which result from the sudden release of energy in the Earth's lithosphere, and volcanism, involving the eruption of magma, ash, and gases. Another significant category is hydrometeorological hazards, which are of atmospheric or hydrological origin. This includes cyclones (also known as hurricanes or typhoons), which are powerful rotating storm systems, and tsunamis, which are series of large ocean waves typically caused by underwater earthquakes or volcanic eruptions. It also encompasses floods, droughts, and famines, which relate to excesses or deficits in water. Geomorphological hazards like landslides, which involve the movement of rock and debris down a slope, and avalanches, the rapid flow of snow down a mountain, are also part of this classification. A specific and increasingly studied phenomenon is the Glacial Lake Outburst Flood (GLOF), which occurs when a dam containing a glacial lake fails. Understanding this classification is crucial as it informs the specific preparedness and mitigation strategies required for each type of hazard.

Based on the above source, attempt the following five questions.

266. According to the text, which of the following pairs are both classified as geological hazards?
(A) Cyclones and Tsunamis
(B) Earthquakes and Volcanism
(C) Landslides and Floods
(D) Droughts and Avalanches

267. A Glacial Lake Outburst Flood (GLOF) is described as an event where:
(A) A glacier melts at an accelerated rate, causing a gradual rise in river levels.
(B) The containment structure of a lake formed by a glacier breaks.
(C) An avalanche of ice and snow flows into a populated valley.
(D) A long-term drought causes a glacial lake to

Click Here to Buy book on Amazon

dry up completely.

268. Based on the classification provided, a tsunami is most accurately categorized as a:
(A) Hydrometeorological hazard due to its manifestation as ocean waves.
(B) Purely geological hazard due to its common cause.
(C) Geomorphological hazard related to coastal erosion.
(D) Climatic hazard associated with long-term weather patterns.

269. The primary distinction used for the classification of disasters in the paragraph is based on their:
(A) Economic impact
(B) Geographical location
(C) Origin, as either natural or human-induced
(D) Frequency of occurrence

270. Which of the following is described as a hydrometeorological hazard resulting from a deficit, rather than an excess, of water?
(A) Flood
(B) Tsunami
(C) Cyclone
(D) Drought

Direction : Please read the following source carefully.

Different natural hazards are characterized by distinct causes, physical properties, and damage potentials, which necessitate tailored management strategies. Earthquakes, for instance, are caused by the sudden release of seismic energy from tectonic plate movement, generating ground shaking that can lead to structural collapse, liquefaction, and secondary hazards like landslides and tsunamis. Their damage potential is a function of magnitude, depth, distance from the epicenter, local geology, and, crucially, building quality. Volcanism involves the extrusion of lava, pyroclastic flows, ash fall, and release of volcanic gases. The damage from volcanism can be widespread, affecting agriculture, air travel, and human health over vast areas, with the primary cause being the movement of magma towards the Earth's surface. Cyclones are intense low-pressure systems that form over warm tropical waters, characterized by high-velocity winds, torrential rainfall, and storm surges. Their damage potential is immense in coastal areas, leading to catastrophic flooding, wind damage to infrastructure, and coastal erosion. Tsunamis, often triggered by submarine earthquakes, are series of long-wavelength ocean waves that can travel across entire ocean basins. Upon reaching shallow coastal waters, their height increases dramatically, causing extensive inundation and destruction far inland. The characteristics of each hazard—from the rapid onset of an earthquake to the slower development of a cyclone—directly influence the viability of early warning systems and evacuation plans.

Based on the above source, attempt the following five questions.

271. The damage potential of an earthquake is described as being dependent on a combination of natural and human factors. Which of the following is presented as a crucial human factor?
(A) The magnitude of the seismic event.
(B) The geological conditions of the local area.
(C) The quality of building construction.
(D) The depth of the earthquake's focus.

NODIA

272. Which hazard is characterized by high-velocity winds, torrential rainfall, and storm surges, causing immense damage primarily to coastal regions?
(A) Earthquake
(B) Cyclone
(C) Volcanism
(D) Tsunami

273. According to the text, what is a common trigger for a tsunami?
(A) A severe storm surge during a cyclone.
(B) The collapse of a large-scale landslide into the sea.
(C) The rapid melting of polar ice caps.
(D) An earthquake occurring on the ocean floor.

274. The paragraph implies that the effectiveness of early warning systems is directly influenced by:
(A) The characteristic onset time and development speed of the hazard.
(B) The economic cost of the potential damage.
(C) The geographic location of the hazard.
(D) The historical frequency of the hazard in a region.

275. The impact of ash fall on agriculture and air travel is mentioned as a significant consequence associated with which natural hazard?
(A) Tsunamis
(B) Earthquakes
(C) Volcanism
(D) Cyclones

Direction : Please read the following source carefully.

Beyond geological and seismic events, a significant portion of natural hazards relates to climatic and geomorphological processes. Floods, defined as an overflow of a large amount of water beyond its normal limits, are among the most common and destructive hazards. They can be caused by intense or prolonged rainfall, rapid snowmelt, or storm surges. Their damage potential is high, affecting agriculture, infrastructure, and public health through waterborne diseases. Conversely, droughts are characterized by a prolonged period of abnormally low rainfall, leading to a shortage of water. The impacts of drought are slow-onset but can be devastating, leading to crop failure, water scarcity, and ultimately famines, which represent a widespread scarcity of food. Landslides, a type of geomorphological hazard, involve the movement of rock, debris, or earth down a sloped section of land. They can be triggered by rainfall, earthquakes, or human activities like deforestation and excavation. Their damage is typically localized but can be extremely destructive to life and property in their direct path. Avalanches are conceptually similar but involve the rapid flow of large masses of snow and ice down a mountainside. They pose a significant threat in alpine regions, burying infrastructure and causing fatalities. Understanding the specific causes of these hazards, such as the role of rainfall in both floods and landslides, is fundamental to developing effective mitigation and land-use planning policies.

Based on the above source, attempt the following five questions.

276. Which of the following statements accurately contrasts floods and droughts as described in the text?
(A) Floods are caused by an excess of water, while droughts are caused by a deficit.
(B) Floods are geomorphological, while droughts are climatic.
(C) Floods have a slow onset, while droughts are rapid-onset events.
(D) Floods primarily affect agriculture, while droughts primarily damage infrastructure.

NODIA

277. The paragraph identifies which of the following as a potential trigger for landslides?
(A) Prolonged periods of low rainfall.
(B) The rapid flow of snow down a mountain.
(C) The formation of a low-pressure system over the ocean.
(D) Intense rainfall and human excavation activities.

278. Famine is presented in the text as a potential consequence resulting from which other hazard?
(A) Flood
(B) Drought
(C) Landslide
(D) Avalanche

279. Avalanches are described as posing a significant threat primarily in which type of environment?
(A) Coastal plains
(B) Arid deserts
(C) Alpine regions
(D) Tropical rainforests

280. The text suggests that effective land-use planning is a crucial mitigation strategy, particularly because:
(A) Human activities like deforestation can trigger hazards such as landslides.
(B) All natural hazards are fundamentally caused by human intervention.
(C) Land-use planning can prevent the occurrence of droughts and floods entirely.
(D) Human activities like deforestation can trigger hazards such as landslides.

Direction : Please read the following source carefully.

In addition to hazards originating from natural processes, a distinct and growing category is the human-induced disaster. These events are caused directly or indirectly by human action or inaction. A primary classification within this group is the technological disaster, which arises from accidents or failures in technology, such as industrial explosions, transport accidents,

or building collapses. These are often rooted in system failures, human error, or inadequate safety measures. A more nuanced sub-category is the socio-technical disaster. This concept acknowledges that many technological failures are not purely technical but are deeply embedded in social, organizational, and political contexts. A socio-technical disaster occurs at the interface of a technical system and its social environment, where failures in organizational culture, poor regulation, or economic pressures contribute significantly to the catastrophic event. For example, a chemical plant explosion might be caused by a technical valve failure, but the socio-technical perspective would also investigate the underlying reasons, such as inadequate staff training, budget cuts on maintenance, or a corporate culture that prioritizes production over safety. This highlights that human-induced disasters are not simply "acts of God" but are often the result of complex interactions between human decisions, the societies they build, and the technologies they employ.

Based on the above source, attempt the following five questions.

281. What is the fundamental difference between a natural hazard and a human-induced disaster as described in the passage?
(A) The origin of the causal factors, being either natural processes or human action/inaction.
(B) The scale of the damage and number of casualties.
(C) The speed at which the event unfolds.
(D) The possibility of developing an early warning system.

282. A socio-technical disaster is best understood as an event where:
(A) A natural disaster is made worse by inadequate social response.
(B) Technological failure is intertwined with organizational and social system failures.
(C) A purely technical failure occurs without any human involvement.
(D) A social conflict escalates and leads to technological sabotage.

283. Which of the following scenarios best exemplifies a technological disaster?
(A) A severe drought leading to widespread crop failure.
(B) A major train derailment caused by faulty track maintenance.
(C) An earthquake that destroys several city blocks.
(D) A tsunami that floods a coastal industrial park.

284. The paragraph uses the example of a chemical plant explosion to illustrate that the socio-technical perspective would investigate:
(A) The underlying organizational culture and regulatory environment.
(B) Only the specific mechanical part that failed.
(C) The geological stability of the ground beneath the plant.
(D) The natural weather conditions at the time of the explosion.

285. The passage implies that classifying a disaster as "socio-technical" rather than simply "technological" is important because:
(A) It shifts blame away from individual human error to systemic issues.
(B) It confirms that technology is inherently unsafe and should be avoided.
(C) It shifts blame away from individual human error to systemic issues.
(D) It focuses prevention efforts solely on improving the technology itself.

Direction : Please read the following source carefully.

Within the broader category of human-induced disasters, a particularly hazardous group is Chemical, Biological, Radiological, and Nuclear (CBRN) disasters. Each of these involves the release of specific, highly dangerous agents into the environment, with potentially catastrophic consequences for human health and ecosystems. Chemical disasters result from the release of toxic industrial chemicals, either accidentally, as in a factory leak or transportation spill, or intentionally. These substances can cause immediate death, long-term illness, and environmental contamination. Biological disasters involve the release of pathogenic microorganisms, such as bacteria or viruses, or their toxins. This can occur through a natural epidemic that is exacerbated by human factors,

Downloaded from www.pdf.tube

a laboratory accident, or the deliberate use of bioweapons. The impact can spread rapidly through populations, making containment a primary challenge. Radiological disasters are caused by the release of radioactive materials, which emit ionizing radiation. This could result from an accident at a nuclear power plant, improper disposal of radioactive waste, or the use of a "dirty bomb." Exposure can lead to radiation sickness, cancer, and long-lasting contamination of land and water. Nuclear disasters represent the most extreme end of this spectrum, involving the detonation of a nuclear device, which produces a devastating blast, intense heat, and widespread, lethal fallout. Management of CBRN events requires highly specialized equipment, personnel, and decontamination procedures.

Based on the above source, attempt the following five questions.

286. According to the text, a disaster involving the accidental spill of a toxic substance during its transportation would be classified as which type of CBRN event?
(A) Biological
(B) Radiological
(C) Nuclear
(D) Chemical

287. What is the primary agent of harm in a biological disaster as described in the paragraph?
(A) Ionizing radiation
(B) Pathogenic microorganisms or their toxins
(C) Pathogenic microorganisms or their toxins
(D) Corrosive industrial substances

288. The paragraph differentiates between a radiological disaster and a nuclear disaster by highlighting that a nuclear disaster involves:
(A) Only the improper disposal of waste materials.
(B) The detonation of a device causing a blast and fallout.
(C) The spread of bacteria or viruses.
(D) An accident that is contained within a laboratory.

289. A key challenge mentioned in relation to managing biological disasters is:
(A) The immediate and intense heat produced.
(B) The difficulty of containing the rapid spread of the agent through populations.
(C) The need for specialized equipment to measure blast waves.
(D) The difficulty of containing the rapid spread of the agent through populations.

290. A "dirty bomb" is mentioned as a potential cause for which type of disaster?
(A) Radiological
(B) Chemical
(C) Biological
(D) A conventional technological disaster

Direction : Please read the following source carefully.

The assessment and management of vulnerability and risk are central to proactive disaster management. Vulnerability itself is a multi-faceted concept, often deconstructed into components like exposure, sensitivity, and adaptive capacity. As previously defined, exposure refers to the presence of elements in a hazard-prone area. 'Sensitivity', however, pertains to the degree to which a system or community is likely to be affected by a hazard. For example, a rain-fed agricultural system is highly sensitive to drought. 'Adaptive capacity' refers to the ability of a system to adjust to hazards, moderate potential damages, take advantage of opportunities, or cope with the consequences. A community with diverse income sources has a higher adaptive capacity than one reliant on a single crop. Vulnerability analysis involves examining these factors, including both 'inherent vulnerabilities' (intrinsic characteristics like geographic location) and 'chronic vulnerabilities' (long-term societal conditions like poverty or marginalization). Disaster risk is directly associated with these parameters, often expressed as a function of hazard, exposure, and vulnerability. Consequently, disaster risk mitigation measures are designed to reduce one or more of these elements. Structural measures may reduce hazard impact (e.g., flood defenses), while non-structural measures like land-use planning can reduce exposure. Strengthening livelihoods and improving education can enhance adaptive capacity, thereby reducing overall vulnerability and risk.

Based on the above source, attempt the following five questions.

NODIA

291. Which of the following best defines 'sensitivity' in the context of vulnerability assessment?
(A) The presence of people and infrastructure in a hazardous location.
(B) The ability of a community to adjust its practices to cope with a hazard.
(C) The intrinsic degree to which a system is prone to being affected by a hazard.
(D) The long-term societal conditions like poverty that increase susceptibility.

292. A community's reliance solely on rain-fed agriculture for its economy is provided as an example of:
(A) High sensitivity to drought
(B) High adaptive capacity
(C) Low exposure
(D) Inherent resilience

293. According to the text, a measure such as promoting diverse income sources within a community would directly enhance its:
(A) Exposure to hazards
(B) Sensitivity to hazards
(C) Adaptive capacity
(D) Adaptive capacity

294. The paragraph distinguishes between 'inherent' and 'chronic' vulnerabilities. Which of the following would be an example of an inherent vulnerability?
(A) A community's lack of access to political power.
(B) A community's location on a tectonic fault line.
(C) A community's high rate of poverty.
(D) A community's poor access to education.

295. How does the text suggest disaster risk mitigation measures work?
(A) By focusing exclusively on increasing a community's exposure.
(B) By attempting to eliminate hazards from the environment completely.
(C) By reducing one or more components of risk, such as hazard, exposure, or vulnerability.
(D) By addressing only the chronic vulnerabilities and not the inherent ones.

Direction : Please read the following source carefully.

The effective management of disaster risk in India is contingent upon a detailed understanding of the country's unique hazard and vulnerability profile. India's vast and diverse geography exposes it to a wide array of natural hazards. Its long coastline is vulnerable to cyclones and tsunamis; the Himalayan region is prone to earthquakes, landslides, and Glacial Lake Outburst Floods (GLOFs); and large parts of the peninsular region are subject to droughts, while major river basins frequently experience floods. This hazard profile has distinct regional aspects, meaning that the type and intensity of prevalent hazards vary significantly from one state to another. Similarly, the vulnerability profile of India is deeply complex, shaped by high population density, socio-economic disparities, and varying levels of development. Regional aspects of vulnerability mean that the same hazard can have vastly different impacts depending on the community's socio-economic conditions, infrastructure quality, and institutional capacity. In response to this complex risk landscape, disaster management in India is witnessing the rise of emerging paradigms. These recent developments shift the focus from a post-disaster, relief-centric approach to a more proactive, holistic model emphasizing risk reduction, preparedness, and the strengthening of resilience at all levels of governance, from national to local. This paradigm shift underscores the importance of integrating risk considerations into mainstream development planning.

Based on the above source, attempt the following five questions.

296. According to the text, which part of India is described as being particularly prone to earthquakes and landslides?
(A) The long coastline
(B) The peninsular region
(C) The major river basins
(D) The Himalayan region

297. The paragraph explains that the regional aspects of vulnerability in India mean that:
(A) The impact of a hazard can differ greatly between regions due to socio-economic factors.
(B) All regions in India are equally vulnerable to all types of disasters.
(C) Vulnerability is solely determined by the

Click Here to Buy book on Amazon

physical hazard profile of a region.
(D) Only the densely populated urban centers are considered vulnerable.

298. What is described as the primary "emerging paradigm" in Indian disaster management?
(A) A continued focus on post-disaster relief and response.
(B) A shift towards a proactive model centered on risk reduction and resilience.
(C) A delegation of all disaster management responsibilities to international agencies.
(D) An exclusive focus on technological solutions for hazard monitoring.

299. The hazard and vulnerability profile of India is characterized as:
(A) Uniform and simple, with only one or two major hazards.
(B) Complex and diverse, with significant regional variations in both hazards and vulnerabilities.
(C) Primarily focused on man-made disasters, with few natural hazards.
(D) Stable and unchanging over time, requiring no new paradigms.

300. Based on the passage, why is it important to understand the regional aspects of hazards in India?
(A) Because the type and intensity of prevalent hazards vary significantly across the country.
(B) Because international aid is allocated based on regional hazard maps.
(C) Because it proves that some regions are completely safe from disasters.
(D) Because it allows for a single, uniform disaster management plan for the entire nation.

NODIA

ANSWERS

1. (B) Hazard
A dangerous phenomenon, substance, human activity, or condition that may cause loss of life, injury, or other health impacts is defined as a hazard. It also encompasses property damage, loss of livelihoods, and services, along with social and economic disruption or environmental degradation. Hazards can be single, sequential, or combined in their origin and effects, representing the potential for harm rather than the actual disaster event itself.

2. (A) Elements in hazard zones that are thereby subject to potential losses.
Exposure refers to the presence of people, livelihoods, species, ecosystems, environmental functions, services, resources, infrastructure, and economic, social, or cultural assets in places and settings that could be adversely affected by hazards. It is a critical component of disaster risk assessment because even a severe hazard poses no risk if there are no vulnerable elements present in the specific area where the hazardous event is likely to occur.

3. (C) Both Statement I and Statement II are correct.
Resilience represents the long-term ability of a system or community to adapt and transform following exposure to hazards, ensuring efficient recovery and future sustainability. Coping capacity focuses on the immediate application of available resources and skills to manage adverse conditions during an emergency. While both concepts relate to managing threats, resilience is broader, involving the capacity to learn and change to reduce future vulnerability more effectively.

4. (D) Recovery
The recovery phase follows the immediate response and focuses on restoring basic services and infrastructure to return the community to normalcy. This stage involves both short-term rehabilitation and long-term reconstruction efforts. It provides an opportunity to implement the concept of building back better by integrating disaster risk reduction measures into the rebuilding process, thereby increasing the future resilience of the affected area against potential recurring hazardous events.

5. (C) Assessment
The standard disaster management cycle consists of four primary phases: mitigation, preparedness, response, and recovery. Mitigation involves long-term measures to reduce risk, while preparedness focuses on planning and capacity building. Response covers immediate actions during an event, and recovery deals with restoration. While assessment is a vital tool used within various stages to gather data and inform decision-making, it is not classified as one of the four main phases.

6. (B) Risk
Disaster risk is the potential loss of life, injury, or destroyed assets which could occur to a system, society, or community in a specific period. It is determined probabilistically as a function of hazard, exposure, and vulnerability. This concept helps in understanding the likelihood of harmful consequences resulting from interactions between natural or human-induced hazards and vulnerable conditions. Effective risk management requires balancing these factors through strategic planning.

7. (D) Resilience
Resilience is the ability of a community to resist, absorb, and recover from the effects of a hazard in a timely and efficient manner. Attributes such as strong social networks, diversified livelihoods, and well-maintained infrastructure enhance this ability by providing multiple support systems and physical stability. These factors allow the community to adapt to changes and maintain essential functions during a disaster, facilitating a faster and more sustainable recovery.

8. (A) Risk is the measure of a community's ability to cope with a disaster.
Risk is not a measure of coping ability; rather, it is the probability of harmful consequences or expected losses resulting from interactions between hazards and vulnerable conditions.

Downloaded from www.pdf.tube

Coping capacity is the term used to describe the ability of a community to manage and overcome adverse conditions using available resources. Understanding the distinction between risk as a potential for loss and capacity as a strength is fundamental for accurate disaster assessment.

9. (A) P-2, Q-1, R-4, S-3
Hazards represent potential sources of harm or damaging physical events. Vulnerability signifies the degree of susceptibility to damage or loss within a community or system. Coping capacity refers to the available means and resources used to manage adverse conditions during crises. Risk is the result of the interaction between these factors, often calculated as the product of the probability of a hazard and its expected negative consequences. Accurate mapping ensures effective disaster response.

10. (A) To identify potential hazards and the capacities available to manage them.
A Hazard, Vulnerability, and Capacity Assessment is a diagnostic tool used to identify the specific threats facing a community and the factors that make it susceptible to harm. Crucially, it also evaluates the existing strengths and resources available to reduce these risks. This comprehensive assessment provides the evidence base needed to design effective disaster risk reduction strategies, prioritize interventions, and build local resilience against future natural or man-made events.

11. (D) Emergency
An emergency is a situation that poses an immediate risk to health, life, property, or the environment and requires urgent intervention to prevent it from worsening. While a disaster implies a disruption that overwhelms local capacity, an emergency is characterized by the need for rapid response and specialized services to manage the threat. Effective emergency management focuses on early detection, quick mobilization of resources, and localized coordination to protect the affected population.

12. (A) Both A and R are true and R is the correct explanation of A.
The disaster cycle is viewed as a continuous sequence of actions where each stage is linked to the others in a loop. Effective management relies on a cyclical approach because the outcomes and lessons learned during the recovery and response phases directly inform and improve future mitigation and preparedness strategies. This ongoing process ensures that communities are better equipped to handle subsequent events by constantly refining their strategies through systematic evaluation.

NODIA

13. (C) A family using their food reserves to survive after a flood disrupts supply.
Coping capacity refers to the ability of people and organizations to use available skills and resources to face and manage adverse conditions or emergencies. Using existing food reserves during a supply disruption is a direct application of local resources to survive an immediate crisis. This differs from long-term mitigation or structural measures, as it focuses on the immediate survival and management of the situation using the assets currently held by the affected group.

14. (D) It can exacerbate vulnerability and complicate response efforts.
Conflict significantly impacts disaster management by weakening social structures, destroying infrastructure, and displacing populations, which increases overall vulnerability. During a disaster, active conflict can prevent relief agencies from reaching those in need, interrupt supply chains, and divert essential resources away from emergency response. This creates a complex humanitarian situation where the combined effects of the hazard and the conflict result in much higher levels of suffering and mortality.

15. (B) 2 and 3 only
A disaster occurs when a hazard interacts with vulnerable conditions, exceeding the capacity of the affected population to cope. Therefore, a disaster is considered the actual realization of a potential hazard. Vulnerability is a mandatory condition for this transition, as a hazard in an uninhabited or perfectly resilient area does not result in a disaster. Human activities can indeed create new hazards, such as industrial or technological risks, which can trigger major events.

16. (B) A large-scale volcanic eruption.

Natural hazards are physical events caused by environmental processes that have the potential to cause harm. A volcanic eruption is a geophysical event originating from the Earth's internal tectonic and magmatic activities. In contrast, chemical spills, terrorist attacks, and dam failures due to poor maintenance are categorized as human-induced or technological disasters because they result from human error, negligence, or malicious intent rather than the natural dynamics of the planet's ecological or geological systems.

17. (B) An earthquake
An earthquake is the sudden and violent shaking of the ground caused by the release of accumulated energy in the Earth's lithosphere, which creates seismic waves. This movement typically occurs along fault lines where tectonic plates interact. Volcanic action can also trigger seismic activity as magma moves through the crust. The severity of the impact depends on the magnitude of the energy release, the depth of the event, and the proximity to populated areas.

18. (A) Large-scale underwater landslides or earthquakes.
Tsunamis are a series of massive ocean waves typically generated by the sudden displacement of a large volume of water. The most common cause is an underwater earthquake that causes vertical movement of the seafloor. Other triggers include submarine landslides, volcanic eruptions, or even meteorite impacts. Unlike regular waves caused by wind, tsunamis involve the movement of the entire water column from the seabed to the surface, carrying immense energy across vast distances.

19. (C) Epicenter located deep within the Earth's crust
Tropical cyclones are intense low-pressure weather systems characterized by strong rotating winds and heavy precipitation. They typically feature a calm center known as the eye. While they cause significant coastal damage through storm surges, they are purely atmospheric phenomena. The term epicenter is specifically used in seismology to describe the point on the Earth's surface directly above the focus of an earthquake, which is a geological process entirely different from meteorological storm systems.

20. (D) Drought
A drought is a slow-onset natural hazard characterized by a prolonged period of abnormally low precipitation that leads to a water shortage. This deficit impacts various sectors, including agriculture, ecosystems, and human consumption. Unlike rapid-onset events like floods, droughts develop gradually and can persist for months or years, causing widespread economic loss and food insecurity. Effective management requires monitoring rainfall patterns, managing water resources sustainably, and developing drought-resistant agricultural practices to mitigate long-term impacts.

21. (A) Both A and R are true and R is the correct explanation of A.
Landslides are frequent in mountainous terrain following intense rainfall because water saturation increases the weight of the slope material while simultaneously reducing the internal friction and cohesion of the soil. This hydraulic pressure destabilizes the slope, leading to failure and rapid downward movement of earth and rock. Thus, the meteorological event acts as a direct physical trigger for the geological hazard, especially in areas with steep topography and significant soil cover.

22. (B) Widespread food scarcity caused by environmental or policy factors.
Famine is a severe and widespread scarcity of food that leads to malnutrition, starvation, and increased mortality rates across a population. While often triggered by natural events like droughts or floods, its severity is frequently exacerbated by human factors such as political instability, conflict, and poor economic policies. It represents a systemic failure where the food supply and distribution networks are unable to meet the basic nutritional needs of a large group of people.

23. (D) Tsunami - A type of tropical storm
A tsunami is a series of massive ocean waves caused by the displacement of water, usually due to underwater earthquakes or landslides. It is a geophysical phenomenon, not a meteorological one. In contrast, tropical storms, such as cyclones, hurricanes, or typhoons, are atmospheric systems driven by wind and pressure differences. Matching a tsunami with a tropical storm is

Click Here to Buy book on Amazon

incorrect as they have entirely different origins, physical characteristics, and methods of detection and warning.

24. (A) The failure of a dam containing a glacial lake.
A Glacial Lake Outburst Flood occurs when a dam composed of ice or loose glacial debris, known as a moraine, fails suddenly. This failure releases a massive volume of water stored in the glacial lake, leading to catastrophic flooding downstream. These events are often triggered by rapid melting of glaciers, avalanches falling into the lake, or seismic activity. They represent a significant hazard in high-mountain regions where glacial retreat is creating many new unstable lakes.

25. (B) 2, 4 and 5
Hydro-meteorological hazards are atmospheric, hydrological, or oceanographic phenomena that can cause loss of life or property damage. Cyclones involve intense wind and rain systems, floods result from excessive water accumulation, and droughts are characterized by prolonged moisture deficits. While earthquakes and landslides are geological or geomorphological in nature, the others are driven by weather and climate patterns, making them part of the hydro-meteorological category in disaster classification for risk assessment and planning purposes.

26. (A) Magnitude, depth, and distance from the populated area.
The destructive impact of an earthquake is determined by several physical parameters. Magnitude measures the total energy released, while depth determines how much that energy dissipates before reaching the surface. Proximity to human settlements is critical, as seismic waves are most intense near the source. Other factors include the local soil type, which can amplify shaking, and the quality of building construction, but the primary geological factors remain the size, location, and depth.

27. (D) A combination of technological failure and human or social error.
Socio-technical disasters occur when failures in complex technological systems interact with human or organizational errors. These events are not caused by technology alone but are often the result of poor management, inadequate safety protocols, or lack of training. For example, a major industrial accident might involve a technical malfunction exacerbated by delayed human response or failure to follow established safety procedures. This classification emphasizes the importance of human factors in maintaining the safety of technological systems.

28. (B) A nuclear power plant meltdown.
Technological disasters are caused by the failure of man-made systems, industrial processes, or infrastructure. A nuclear power plant meltdown is a primary example, as it involves the malfunction of complex technology leading to significant environmental and health hazards. While earthquakes and floods are natural disasters, and their impact on technology can create secondary risks, a technological disaster specifically originates from the technology itself, often due to equipment failure, human error, or design flaws.

29. (B) 3, 2, 1, 4
The chronological sequence of a Glacial Lake Outburst Flood begins with the accelerated melting of the parent glacier, which causes a rapid increase in the water level of the associated lake. This increased volume and pressure eventually lead to the failure of the unstable moraine or ice dam. Once the dam breaches, the stored water is released suddenly, resulting in devastating downstream flooding. Understanding this process is essential for monitoring and early warning in mountainous regions.

30. (D) Chemical, Biological, Radiological, and Nuclear
CBRN disasters are a specific category of human-induced threats involving hazardous materials. These events can result from accidents, negligence, or intentional acts like terrorism. Chemical disasters involve toxic substances, biological ones involve pathogens, radiological incidents involve the dispersal of radioactive materials, and nuclear disasters involve uncontrolled chain reactions. Management of these risks requires specialized expertise and equipment due to the unique medical and environmental challenges posed by each specific type of agent in different scenarios.

31. (A) An avalanche

Downloaded from www.pdf.tube

An avalanche is a rapid flow of snow, ice, and often rock or soil down a mountainside. It occurs when the accumulated snowpack becomes unstable and loses its grip on the underlying slope. Triggers can include heavy snowfall, rapid temperature changes, or human activity like skiing. Avalanches represent a major hazard in mountainous regions, capable of destroying everything in their path and requiring specialized detection and rescue techniques to protect lives and property.

32. (B) Industrial gas leak
Human-induced disasters are events caused by human activities, negligence, or the failure of man-made systems. An industrial gas leak, such as the Bhopal tragedy, is a prime example of a disaster originating from industrial processes and safety failures. In contrast, volcanic eruptions, tsunamis, and cyclones are natural disasters caused by geophysical and meteorological processes. Distinguishing between these categories is important for determining the appropriate prevention strategies, legal responsibilities, and specific response protocols for different events.

33. (B) Only Statement II is correct.
Not all man-made disasters are intentional; many are unintentional results of human error or system failures. Technological disasters, such as industrial accidents or transportation crashes, often occur due to technical malfunctions or negligence rather than deliberate harm. This distinction is crucial in disaster management for developing safety regulations and accountability frameworks. While intentional acts like terrorism exist, the majority of human-induced disasters are unintended consequences of the complex technological and social systems in modern society.

34. (A) Biological
A biological disaster involves the release of pathogenic microorganisms or their toxins that can cause disease and death in humans, animals, or plants. This can occur naturally, as in the case of a pandemic, or through accidental or intentional releases. While chemical and radiological disasters involve toxic substances or radiation, biological disasters are unique because they involve living organisms that can reproduce and spread through a population, requiring specific medical and public health response strategies.

35. (B) P-2, Q-1, R-3, S-4
Natural hazards are classified based on their primary origin. Earthquakes are geological as they stem from internal earth processes. Cyclones are meteorological events driven by atmospheric conditions and pressure. Droughts are climatological because they relate to long-term precipitation patterns and climate variability. Landslides are geomorphological, involving the movement of surface materials and landform changes. Proper classification is essential for identifying the correct scientific agencies responsible for monitoring, forecasting, and providing early warnings for each hazard.

36. (D) Harmful radiation from radioactive materials.
A radiological disaster involves the release of harmful ionizing radiation from radioactive materials without a nuclear chain reaction. This occurs through industrial accidents, transport spills, or the use of dirty bombs. Unlike nuclear explosions, the primary hazard comes from exposure to radioactive contamination. This can have significant long-term health effects on the population and requires extensive environmental cleanup to make the affected areas safe for human habitation again, often involving complex decontamination procedures and long-term monitoring.

37. (C) A nuclear disaster involves a chain reaction, whereas a radiological one involves dispersion of radioactive material.
The fundamental difference between nuclear and radiological disasters lies in the physical process involved. A nuclear disaster, such as a power plant meltdown or weapon detonation, involves a controlled or uncontrolled nuclear chain reaction. In contrast, a radiological disaster involves the dispersal of radioactive materials through conventional means, such as an accident or a dirty bomb, without a nuclear explosion. Both present radiation hazards, but the scale of energy and destruction is vastly different in a nuclear event.

38. (B) A train derailment caused by a combination of track failure and operator error.

NODIA

A socio-technical disaster arises from the failure of a system where technology and human or social elements interact. A train derailment involving both technical track failure and human operator error perfectly illustrates this concept. It highlights that the disaster was not caused by technology alone but by the breakdown of the entire system, including its management and operation. These events require holistic investigations that look beyond simple mechanical failure to identify systemic weaknesses in training and safety culture.

39. (B) 1, 2 and 3 only
Human-induced disasters encompass technological and socio-technical categories and include significant sub-categories like CBRN incidents. These events are linked to human error, negligence, or malicious intent. However, their impact is not always localized; large-scale industrial accidents or biological pandemics can have regional, national, or even global consequences. Understanding the broad potential impact of these disasters is essential for developing comprehensive emergency response plans and international cooperation frameworks to manage cross-border risks and widespread environmental damage.

40. (A) Exposure, Sensitivity, and Adaptive Capacity
Vulnerability is defined by the interaction of three main components. Exposure determines which assets or populations are in the hazard zone. Sensitivity describes the degree to which these elements are affected by a specific hazard intensity. Adaptive capacity refers to the ability of the system to adjust and moderate potential damages or cope with the consequences. Together, these factors provide a comprehensive view of how susceptible a community is to disaster impacts, allowing for targeted risk reduction strategies.

41. (C) The degree to which a system is affected, either adversely or beneficially, by a hazard.
Sensitivity refers to the degree to which a system is affected, either adversely or beneficially, by a hazard. It determines how a community or ecosystem responds to a specific intensity of a hazardous event. A crop highly sensitive to moisture changes will suffer more during a drought than a resilient variety. Understanding sensitivity is vital for assessing vulnerability and designing targeted measures to protect the most susceptible elements from damage during crises, focusing on those most likely to be impacted.

42. (A) Both A and R are true and R is the correct explanation of A.
High adaptive capacity is a crucial factor in reducing a community's overall vulnerability to hazards. It represents the ability of a society to adjust its practices, social structures, and resources to moderate potential damages or to cope with the actual consequences of a disaster. By having the flexibility to change and adapt, a community can lower its sensitivity and exposure over time, making it much more resilient when faced with natural or man-made hazardous events.

43. (D) The ability of a system to adjust to a hazard to moderate potential damages and cope with consequences.
Adaptive capacity is the ability of a system, community, or society to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. It involves having the resources, knowledge, and flexibility to change behaviors and processes in a way that reduces vulnerability. Enhancing adaptive capacity is a key goal of disaster risk reduction, as it empowers communities to actively manage their own risks and recover more effectively from the impacts of various hazards.

44. (B) Are deeply embedded in the social, economic, and political structures of a community.
Inherent vulnerabilities are those that exist within a community long before a specific hazard occurs. They are rooted in deep-seated social inequalities, economic disparities, and political structures that determine who has access to resources and safe living environments. For example, marginalization based on gender, age, or income creates inherent vulnerabilities that make certain groups more susceptible to harm. Addressing these fundamental issues is essential for achieving long-term and sustainable disaster risk reduction in any society.

45. (C) Persists over a long period, making a community constantly susceptible to shocks.

Click Here to Buy book on Amazon

Chronic vulnerability refers to long-term, persistent factors that make a population or system continuously susceptible to the impacts of various hazards. Unlike temporary vulnerabilities that might arise during a specific event, chronic vulnerability is often tied to systemic issues like poverty, lack of education, or inadequate infrastructure. These conditions hinder a community's ability to prepare for, respond to, and recover from disasters, creating a cycle of risk that requires long-term development interventions to break effectively.

46. (D) The probability of the hazard occurring.
Disaster risk is fundamentally determined by the probability of a hazardous event occurring and the severity of its potential impact. The likelihood of the hazard is a key parameter in risk calculation, as it helps planners understand how often an event might happen based on historical data and scientific modeling. Combined with assessments of vulnerability and exposure, this probability allows for the prioritization of resources and the development of appropriate mitigation strategies for different levels of risk.

47. (A) 1 and 3 only
Risk is correctly defined as a function of hazard, exposure, and vulnerability. Furthermore, reducing vulnerability is achieved by increasing the adaptive capacity of a community. However, zero exposure results in zero risk to humans, not high risk. Sensitivity refers to the response of a system, not just its location. Finally, vulnerability assessment is an ongoing, dynamic process rather than a one-time activity, as social and environmental conditions change constantly, requiring regular updates to remain effective and accurate.

48. (B) Enforcing building codes to make structures earthquake-resistant.
Mitigation measures focus on reducing the potential adverse impacts of hazards through long-term planning and structural or non-structural changes. Enforcing building codes for earthquake resistance is a classic structural mitigation measure that reduces the physical vulnerability of infrastructure. Unlike response actions like search and rescue or relief distribution, which happen during or after an event, mitigation occurs before a disaster to prevent or minimize future losses, representing a proactive and cost-effective approach to disaster management.

49. (C) To provide timely information that allows people to reduce risk.
The primary purpose of an Early Warning System is to provide timely and accurate information about an approaching hazard, enabling individuals and communities to take protective actions. By giving people enough lead time to evacuate, secure property, or activate emergency plans, these systems significantly reduce the risk of injury, loss of life, and property damage. An effective system integrates scientific monitoring with clear communication channels and public education to ensure the warnings are understood and followed correctly.

NODIA

50. (B) Exchanging all-hazard emergency alerts and public warnings.
The Common Alerting Protocol is a digital message format used to exchange emergency alerts across different communication platforms simultaneously. It allows a single emergency alert to be disseminated over multiple channels like radio, television, the internet, and mobile phones in a consistent manner. By standardizing the structure of warning messages, it ensures that critical information reaches the public quickly and accurately, regardless of the specific technology or medium used by the alerting authority or the recipients.

51. (D) Adaptive capacity
Switching to drought-resistant crops is a direct example of enhancing adaptive capacity. It represents a system's ability to adjust its processes—in this case, agricultural practices—to moderate potential damages from a known hazard like drought. By changing how they operate to suit the environmental conditions, the farmer reduces the sensitivity of their livelihood to water shortages. This proactive adjustment demonstrates how communities can actively build their own resilience by leveraging knowledge and available resources to reduce their risk profile.

52. (B) Earthquakes and Landslides
The Himalayan region is one of the most disaster-prone areas in India due to its young, tectonic

mountain range and steep slopes. It is highly susceptible to earthquakes because of the ongoing movement of the Indian and Eurasian plates. This seismic activity, combined with heavy monsoon rainfall and geological instability, also makes the region extremely prone to landslides. These hazards pose significant risks to communities and infrastructure, requiring specialized monitoring and high levels of preparedness in these mountainous states.

53. (C) The eastern and western coastal plains.
India's long coastline makes it highly vulnerable to tropical cyclones, with the eastern coast along the Bay of Bengal traditionally experiencing higher frequency and intensity than the western coast along the Arabian Sea. These coastal plains are subject to destructive winds, heavy rainfall, and life-threatening storm surges. Comprehensive disaster management in these regions focuses on early warning systems, coastal shelter construction, and the preservation of natural barriers like mangroves to mitigate the impact of these recurring meteorological events.

54. (C) Both Statement I and Statement II are correct.
India has a very high hazard profile, with over half of its landmass prone to moderate to very high-intensity earthquakes, particularly in the Himalayan and North-Eastern regions. Simultaneously, its 7,500-kilometer coastline is significantly vulnerable to tropical cyclones and the rare but devastating threat of tsunamis. This dual vulnerability requires a multi-hazard approach to disaster management, integrating seismic safety with coastal protection strategies to safeguard the diverse populations and assets across the entire country.

55. (B) A shift from a response-centric to a proactive, holistic approach.
An emerging paradigm in India's disaster management is the shift away from a focus solely on post-disaster relief toward a more proactive, holistic approach. This new model emphasizes disaster risk reduction, integrating preparedness, mitigation, and resilience into development planning. It moves beyond just managing the event to managing the risk itself, involving multiple stakeholders and community participation. This systematic shift aims to minimize the impact of disasters through long-term planning rather than relying only on reactive measures.

56. (B) Floods
The Gangetic plains in India are predominantly vulnerable to floods due to the vast network of rivers and the flat topography. During the monsoon season, heavy rainfall causes these rivers to overflow, inundating large areas of fertile land and densely populated settlements. This recurring hazard is exacerbated by factors such as siltation of riverbeds, encroachment on floodplains, and deforestation in the catchment areas. Management of this risk involves a combination of structural measures like embankments and non-structural planning.

57. (D) The entire Himalayan belt is classified under the lowest seismic hazard zone.
The statement that the Himalayan belt is in the lowest seismic hazard zone is factually incorrect; it is actually classified under the highest seismic risk zones (Zones IV and V). This region is seismically active because it marks the collision boundary of tectonic plates. In contrast, the other regional descriptions—the stability of the Deccan Plateau regarding earthquakes, the tsunami risk in the islands, and the cyclone vulnerability of the eastern coast—accurately reflect India's diverse and complex hazard and vulnerability profile.

58. (A) Community-based disaster management.
A significant development in India's disaster management is the increased emphasis on Community-Based Disaster Management. This approach recognizes that local communities are the first responders and possess valuable traditional knowledge. By involving them in risk assessment, planning, and preparedness, the overall resilience is strengthened. This shift empowers people to take ownership of their own safety and ensures that disaster management strategies are culturally appropriate, sustainable, and effectively implemented at the grassroots level where they are most needed.

59. (C) Adapt, transform, and improve after a disaster.
Resilience is a more comprehensive concept than coping capacity because it includes the ability of a system to learn from disasters and adapt its structures to reduce future risk. Coping capacity is about surviving an immediate crisis with

Downloaded from www.pdf.tube

current resources, whereas resilience involves long-term transformation and improvement. A resilient community does not just return to its previous state but evolves into a more secure and adaptive system, effectively breaking the cycle of vulnerability through continuous learning and structural changes.

60. (A) 2, 4, 1, 3
The logical sequence of the traditional disaster management cycle begins with mitigation to reduce long-term risks, followed by preparedness to build capacity before an event. Once a disaster occurs, the response phase provides immediate life-saving assistance. Finally, the recovery phase focuses on restoring services and rebuilding the community. This sequence ensures a systematic approach where each phase prepares for or learns from the others, creating a continuous loop of risk reduction and management to enhance safety.

61. (B) 2, 3 and 4
Disaster risk is a dynamic concept that changes over time based on shifts in hazards, exposure, and vulnerability. It is correctly calculated as the product of hazard and vulnerability. If there is no vulnerability, there is no risk, and similarly, reducing the exposure of elements to hazards directly lowers the overall risk level. Understanding these relationships is crucial for disaster managers, as it allows them to target specific components to effectively reduce the potential for future losses and damage.

62. (B) A flood
A flood is the overflow of water onto land that is normally dry. It can be caused by heavy rainfall, rapid snowmelt, storm surges, or the failure of dams and levees. Floods are among the most common and destructive natural hazards globally, impacting agriculture, infrastructure, and human settlements. They range from slow-onset riverine floods to rapid-onset flash floods. Effective management includes early warning systems, floodplain zoning, and structural defenses to protect vulnerable populations and minimize economic damage.

63. (B) Sustainable agricultural practices.
Sustainable agricultural practices are designed to protect and enhance the natural environment, making them the least likely human activity to cause a disaster. In contrast, poorly regulated industrial production can lead to chemical spills, deforestation in hills increases landslide risk, and unplanned urban expansion often destroys natural drainage, causing flash floods. By maintaining ecological balance and soil health, sustainable farming reduces vulnerability and prevents the creation of new human-induced hazards, contributing to long-term community resilience and environmental safety.

64. (A) Volcanic ash and aerosols can trigger short-term global cooling.
Volcanic eruptions can influence global climate by injecting large amounts of ash and sulfur dioxide into the stratosphere. These aerosols reflect incoming solar radiation back into space, which can lead to a measurable drop in global temperatures for several years. This phenomenon is a significant example of how geophysical events can have widespread atmospheric consequences. While the effect is typically short-term, massive historical eruptions have caused significant climatic shifts, impacting agriculture and weather patterns on a global scale.

65. (A) Both A and R are true and R is the correct explanation of A.
Unplanned urbanization significantly increases a city's vulnerability to flash floods. When natural ground is covered with impermeable surfaces like concrete and asphalt, the land can no longer absorb rainwater. This leads to a massive increase in surface runoff, which quickly overwhelms local drainage systems. The resulting rapid accumulation of water in urban areas causes flash floods, demonstrating how human development choices directly interact with meteorological hazards to create more frequent and severe disaster events.

66. (B) High hazard, low vulnerability, reduced risk.
In this scenario, the presence of a seismic fault line ensures that the geological hazard remains high. However, by using earthquake-resistant technology, the physical vulnerability of the buildings is significantly lowered. Since disaster risk is a function of both hazard and vulnerability, the overall risk to the community is reduced. This example illustrates that while we often cannot eliminate natural hazards, we can effectively manage risk by investing in mitigation

NODIA

measures that reduce the susceptibility of our infrastructure.

67. (C) To determine the exact timing of the next disaster event.
Vulnerability assessment aims to identify who is most at risk and understand the underlying reasons for their susceptibility. This information is crucial for designing effective mitigation and preparedness strategies. However, assessing vulnerability cannot determine the exact timing of a future disaster event, as that depends on the unpredictable nature of hazards themselves. The focus of the assessment remains on the human and social conditions that lead to susceptibility rather than forecasting the specific occurrence of a natural phenomenon.

68. (B) P-3, Q-1, R-4, S-2
Disasters are categorized by their specific agents. Biological disasters include pandemics like COVID-19. Chemical disasters often involve industrial leakages of toxic substances. Radiological disasters can be caused by dirty bombs that disperse radioactive material using conventional explosives. Nuclear disasters involve atomic reactions, such as those in power plant accidents or bombs. Correctly identifying these categories is essential for emergency responders to use the appropriate protective gear, medical treatments, and decontamination procedures required for different hazardous materials.

69. (B) A region being susceptible to several different types of natural and man-made hazards.
Multi-hazard vulnerability refers to a situation where a single geographic area is prone to multiple types of disasters, such as a coastal region facing both cyclones and tsunamis, or a mountain area prone to earthquakes and landslides. In India, many regions exhibit this profile due to diverse climatic and geological conditions. Addressing multi-hazard vulnerability requires integrated disaster management plans that consider how different hazards might interact or occur sequentially, ensuring comprehensive protection for communities facing complex risk environments.

70. (A) Integrating disaster risk reduction into development planning.
A holistic approach to disaster management represents a shift from focusing only on immediate relief after an event to integrating risk reduction into all stages of development. This means that infrastructure, housing, and economic projects are designed with future hazards in mind, aiming to prevent the creation of new risks. By mainstreaming disaster risk reduction, governments can build more resilient societies where development progress is protected from the destructive impacts of natural and man-made disasters over time.

71. (D) An earthquake
An earthquake is the rapid release of energy in the Earth's crust that creates seismic waves. This release typically occurs when stress accumulated along fault lines exceeds the strength of the rock, causing a sudden slip. The resulting vibrations can cause massive destruction to buildings and infrastructure. Understanding the mechanics of seismic energy release is fundamental for geological monitoring, building safer structures, and developing early warning systems that can provide a few seconds of notice before the strongest shaking begins.

72. (A) 1 and 2 only
Cyclones are indeed characterized by winds rotating around a low-pressure center, and tsunamis are waves generated by large-scale water displacement. However, landslides can be triggered by many factors beyond earthquakes, including heavy rainfall and human activity. Furthermore, droughts are typically slow-onset hazards that develop over months or years, rather than being rapid-onset events. Accuracy in defining these characteristics is essential for developing appropriate monitoring and response strategies for different types of natural and man-made hazardous events.

73. (B) The capacity of the affected community to cope using its own resources.
The distinction between an emergency and a disaster depends on whether the affected community can manage the situation with its own resources. An emergency requires urgent action but stays within the capability of local responders. A disaster occurs when the scale of the impact overwhelms local capacity, necessitating external or international assistance.

Click Here to Buy book on Amazon

This concept is central to disaster management, as it determines when higher levels of government or international aid organizations must intervene to support the affected population.

74. (C) Constructing levees and floodwalls.
Structural mitigation involves physical construction and engineering works designed to reduce or prevent the impact of hazards. Building levees and floodwalls are classic examples of structural measures for flood control, as they physically block or redirect water. In contrast, early warnings, hazard mapping, and evacuation drills are non-structural measures that focus on planning, policy, and behavioral changes. A balanced disaster management strategy often uses both structural and non-structural approaches to provide the most effective protection for vulnerable communities.

75. (A) 1, 2 and 4
Preparedness involves actions taken before a disaster to build the capacity to respond effectively. This includes developing emergency plans, stockpiling essential supplies, and conducting public awareness campaigns and training. While building codes are a form of mitigation and international reconstruction funding is part of recovery, preparedness specifically focuses on the readiness to act when a hazard strikes. These activities ensure that both emergency services and the general public know how to respond quickly and efficiently to save lives.

76. (B) The likely severity and extent of adverse effects that may result from the hazard.
Damage potential refers to the estimated degree of destruction and loss that a hazard could cause if it strikes a specific area. It is influenced by the magnitude of the hazard and the vulnerability of the elements exposed to it. For example, a high-magnitude earthquake in a densely populated city with poor building standards has very high damage potential. Assessing this potential is a critical part of risk analysis, helping authorities prioritize mitigation efforts and prepare for the likely scale of impact.

77. (C) Famine is a potential and severe consequence of a prolonged drought.
Drought is a meteorological and hydrological phenomenon characterized by a prolonged lack of rainfall. Famine is a socio-economic disaster marked by widespread food scarcity and starvation. While they are distinct concepts, a severe and extended drought often serves as a primary trigger for famine, especially in regions with high agricultural dependence and low economic resilience. The link between the two illustrates how natural hazards can lead to catastrophic social outcomes if adequate food security and distribution systems are not in place.

NODIA

78. (A) To provide a standard alert format compatible with multiple technologies.
The fundamental principle of the Common Alerting Protocol is to create a standardized, digital format for emergency alerts that works across all types of communication devices and networks. By using a uniform structure, a single warning message can be easily translated and disseminated through sirens, cell phones, radio, and the internet. This ensures that the same critical information reaches as many people as possible as quickly as possible, regardless of the technology they use, improving the overall effectiveness of warnings.

79. (C) Economic
Economic vulnerability refers to the susceptibility of individuals or communities to financial loss and the disruption of their livelihoods due to a hazard. A coastal community that relies solely on a single industry, like fishing, has high economic vulnerability because a tsunami can destroy their primary means of income. Diversifying livelihoods and having financial safety nets like insurance are key strategies for reducing economic vulnerability, as they allow people to recover more quickly when their primary source of income is impacted.

80. (A) Both A and R are true and R is the correct explanation of A.
The history of disasters in a region is an essential component of hazard assessment because it provides empirical data on the frequency, magnitude, and impact of past events. By studying historical patterns, scientists and planners can better predict the likelihood and potential severity of future hazards. This information is crucial for developing accurate risk maps, designing appropriate mitigation measures, and ensuring

that preparedness plans are based on the actual threats that the region has faced in the past.

81. (B) A major earthquake that triggers a tsunami, which in turn causes a nuclear power plant failure.
A cascading disaster occurs when a primary hazardous event triggers a sequence of secondary and tertiary disasters, often leading to a much larger and more complex crisis. The 2011 Tohoku event in Japan is a prime example, where an earthquake triggered a tsunami, which then led to a nuclear meltdown. These events demonstrate how modern systems are interconnected and how the failure of one can lead to a chain reaction of disasters that overwhelm conventional response and management strategies.

82. (C) Immediate assistance to save lives.
The response phase of the disaster cycle begins immediately when a hazard strikes or is about to strike. Its primary focus is on saving lives, protecting property, and meeting the basic needs of the affected population. Key activities include search and rescue, medical assistance, providing emergency shelter, and distributing food and water. This phase is characterized by urgent, short-term actions aimed at stabilizing the situation before the longer-term processes of recovery and reconstruction can begin.

83. (C) Flood - Can be both rapid and slow onset
Hazards are categorized by their onset speed. Floods can be rapid, as in the case of flash floods caused by intense rainfall or dam failure, or slow-onset, such as riverine flooding that develops over days. In contrast, earthquakes are always rapid-onset, cyclones are centered around low-pressure systems, and droughts are quintessential slow-onset disasters. Understanding these characteristics is vital for emergency planners to develop appropriate early warning systems and response protocols that match the speed and nature of each specific hazard.

84. (C) 3, 1, 2
The historical paradigm shift in disaster management typically moved from a civil defense model focused on national protection, to a relief and response model centered on providing aid after the event, and finally to a modern risk reduction and development approach. This progression reflects an increasing understanding that disasters are not just unavoidable acts of nature but are linked to social and economic vulnerabilities that can be managed and reduced through proactive, holistic planning and sustainable development practices.

85. (B) The ability to learn from past disasters and adapt to future risks.
A resilient community is one that can withstand shocks and recover effectively, but most importantly, it possesses the ability to learn and adapt. Instead of simply returning to its previous state, a resilient community uses the experience of a disaster to improve its safety, modify its infrastructure, and strengthen its social systems. This continuous cycle of learning and adaptation reduces future vulnerability, making the community more robust and better prepared to handle subsequent hazardous events over time.

86. (B) Related to the failure or malfunction of technology created by humans.
Technological disasters originate from the failure of man-made systems, industrial processes, or infrastructure, rather than natural environmental cycles. While natural disasters are driven by the Earth's physical processes, technological ones are caused by equipment malfunctions, human error, or design flaws in systems like power plants, chemical factories, or transportation networks. Managing these risks requires specific safety engineering, strict regulatory oversight, and emergency protocols designed to contain hazardous materials or manage complex technical failures that natural disaster plans may not cover.

87. (B) The root causes of inequality and disaster risk.
Analyzing inherent and chronic vulnerabilities is crucial because it allows disaster managers to address the fundamental social, economic, and political factors that create risk. By understanding why certain groups are persistently more susceptible to harm—such as through poverty, marginalization, or poor infrastructure—planners can develop long-term interventions that address these root causes. This moved beyond immediate relief to sustainable risk reduction, aiming to create a more equitable society where

NODIA

the impact of disasters is minimized for all members.

88. (A) P-2, Q-3, R-1, S-4
Exposure refers to the physical presence of populations in hazard zones, such as people living on a floodplain. Sensitivity is the degree to which an element is susceptible to damage, like a crop's vulnerability to certain moisture levels. Adaptive capacity involves the ability to adjust, such as a farmer switching to new crop varieties to manage risk. Vulnerability is the overall susceptibility of a system, combining all these factors. Accurate matching of these concepts is essential for a comprehensive risk assessment.

89. (C) A large part of its arable land is prone to drought.
India has a significant vulnerability to droughts, with nearly two-thirds of its arable land being prone to moisture stress. This recurring hazard poses a major threat to food security and the livelihoods of millions of people who depend on agriculture. Unlike earthquakes or tsunamis, which are more geographically localized, the threat of drought spans across vast parts of central and western India, requiring large-scale water management strategies and the promotion of drought-resistant agricultural practices to mitigate its impact.

90. (C) Reduce the magnitude or likelihood of adverse impacts.
The main objective of disaster risk mitigation is to lessen the severity of a hazard's consequences before it occurs. This is achieved through structural measures, such as building stronger infrastructure, and non-structural measures, like implementing land-use policies and public education. By proactively reducing vulnerability and exposure, mitigation aims to ensure that when a hazardous event does happen, the resulting loss of life and property damage is significantly minimized, making it a critical component of sustainable disaster management.

91. (B) 1, 3 and 4
Avalanches are indeed flows of snow and ice, volcanism is a geophysical hazard, and cyclones are known by different names such as hurricanes or typhoons in various parts of the world. However, famines are often exacerbated by human factors like conflict, and not all floods are flash floods, as many are slow-onset riverine events. Accuracy in understanding these distinct characteristics is fundamental for classifying hazards correctly and developing specific monitoring and response strategies for each unique type of disaster.

92. (D) Mitigation
Mitigation is the phase most closely associated with long-term land-use planning and structural measures. These actions are designed to permanently reduce or eliminate the risk from hazards by changing the physical or regulatory environment. For example, zoning laws that prevent building in high-risk areas and engineering projects like seawalls or earthquake-resistant buildings are primary mitigation strategies. By investing in these measures during the non-disaster period, communities can significantly lower their overall vulnerability and prevent future hazardous events from becoming major disasters.

93. (C) Radiological
A "dirty bomb" is a type of radiological dispersal device that uses conventional explosives to scatter radioactive material over a localized area. While it uses explosives, it is classified as a radiological disaster because its primary purpose is to cause contamination and long-term health hazards through radiation, rather than through a nuclear chain reaction. It differs from a nuclear weapon in its construction and the scale of its energy release, focusing on causing panic and environmental damage through radioactive exposure.

94. (A) It can act as a trigger for a disaster or as a complicating factor during one.
Conflict is a significant factor in disaster management because it can both cause a disaster, such as a famine through food blockades, and complicate the response to natural disasters. In conflict zones, providing aid is dangerous and logistically difficult, and the existing social and physical infrastructure is often already severely weakened. This creates complex emergencies where the combined effects of the hazard and the violence lead to much higher mortality and suffering than a natural disaster alone would cause.

Downloaded from www.pdf.tube

95. (A) Low or negligible
Disaster risk is a function of hazard, vulnerability, and exposure. If a hazard occurs in a location where there are no people, property, or sensitive assets—meaning zero exposure—the risk to human life and the economy is negligible. A powerful earthquake on an uninhabited island is a major geological event, but it does not constitute a disaster in human terms. This principle highlights that risk management must focus on where hazards and human elements intersect to be effective and efficient.

96. (B) Understand hazard patterns, vulnerability, and learn lessons for the future.
Studying the history of disasters is a vital part of disaster management because it provides data on the frequency and magnitude of hazards in a specific region. It also helps identify which groups were most vulnerable and evaluates the effectiveness of past response and recovery efforts. These historical lessons are essential for creating more accurate risk assessments and improving future preparedness and mitigation strategies, ensuring that the same mistakes are not repeated and that new safety measures are evidence-based.

97. (C) Famine caused by political conflict and food blockades
While Glacial Lake Outburst Floods, avalanches, and volcanism are all physical processes originating from natural environmental dynamics, a famine caused by political conflict and food blockades is a purely human-induced disaster. In such cases, the scarcity of food is not a result of natural factors like drought but is a deliberate or incidental outcome of human actions and policies. Distinguishing between natural and human-induced triggers is essential for determining the appropriate international legal response and humanitarian intervention strategies.

98. (A) Both A and R are true and R is the correct explanation of A.
The adoption of the Common Alerting Protocol significantly enhances the effectiveness of early warning systems. By providing a structured and standardized digital format for alerts, it ensures that warning messages can be easily shared across various communication platforms like radio, internet, and mobile networks. This technological compatibility allows for much wider and faster dissemination of critical information, ensuring that people receive consistent and timely warnings through multiple channels, which is essential for prompt and effective protective action.

99. (C) Community-Based Disaster Management (CBDM)
Community-Based Disaster Management is a paradigm that emphasizes the active participation of local people in all phases of the disaster management cycle. It recognizes that communities are the first to experience and respond to a hazard and possess unique local knowledge and resources. By involving them in risk assessment and planning, disaster management becomes more sustainable, culturally appropriate, and effective. This approach empowers local citizens, builds grassroots resilience, and ensures that response strategies are tailored to the specific needs of the community.

100. (B) 2
Volcanism is a geophysical hazard specifically characterized by the eruption of molten rock, known as magma, along with ash and volcanic gases from the Earth's interior. While plate movement is the underlying driver for both earthquakes and volcanism, the actual eruption process is the defining feature of volcanic activity. This process can cause diverse impacts, from immediate destruction by lava flows to long-term climatic effects caused by ash in the atmosphere, requiring specialized monitoring of geothermal and gas emission patterns.

101. (D) Short-term rehabilitation and long-term reconstruction.
The recovery phase is a comprehensive process that begins after the immediate response and is typically divided into short-term and long-term stages. Short-term rehabilitation focuses on the rapid restoration of basic services like water, power, and healthcare to stabilize the community. Long-term reconstruction involves rebuilding infrastructure, housing, and the economy in a more permanent and resilient way. This dual approach ensures that immediate needs are

NODIA

met while also addressing the systemic goals of building back better for future safety.

102. (C) Vulnerability - The probability of a hazard occurring.
The definition provided for vulnerability is incorrect; it is actually the degree of susceptibility of a community or system to the impacts of a hazard. The probability of a hazard occurring is a characteristic of the hazard itself, often described in terms of its frequency or likelihood. Risk, on the other hand, is the expected loss resulting from the interaction of these two factors. Accurate definitions are essential for clear communication and precise risk assessment in the field of disaster management.

103. (B) Drought
The western region of India, including Rajasthan and parts of Gujarat, has a high vulnerability profile for drought due to its arid and semi-arid climate and high variability in monsoon rainfall. This region frequently experiences water scarcity, which impacts agriculture, livestock, and human consumption. Managing this vulnerability requires a focus on sustainable water harvesting, the use of drought-resistant crop varieties, and the development of robust irrigation systems to protect the livelihoods of the population from recurring moisture deficits.

104. (C) Both Statement I and Statement II are correct.
Hazard assessment and capacity assessment are two fundamental components of the disaster risk assessment process. Hazard assessment focuses on identifying the nature, severity, and frequency of threatening physical events. Capacity assessment identifies the available strengths, resources, and skills within a community that can be used to manage and reduce these risks. Together, they provide a balanced view of the threats faced and the tools available to combat them, allowing for the design of effective and realistic risk reduction strategies.

105. (C) Technological disaster
A fire in a chemical factory that releases toxic fumes is classified as a technological disaster because it originates from the failure of a man-made industrial system. These events are often caused by equipment failure, human error, or inadequate safety protocols in the handling of hazardous materials. Unlike natural disasters, which stem from environmental processes, technological disasters are the unintended consequences of human industrial and technological activities, requiring specialized emergency response, medical treatment for chemical exposure, and rigorous industrial safety regulations.

106. (C) P-2, Q-4, R-1, S-3
Mitigation involves long-term measures like zoning to reduce exposure to hazards. Preparedness includes activities like evacuation drills to ensure readiness before an event. Response focuses on immediate life-saving actions such as search and rescue during a disaster. Recovery involves the long-term process of rebuilding infrastructure and community life after the event. Matching these activities correctly is essential for understanding the different goals and timings of each phase in the comprehensive disaster management cycle for any community.

107. (B) Tsunami
A tsunami is classified as a hazard of geological origin because it is typically triggered by underwater earthquakes, volcanic eruptions, or submarine landslides—all of which are geological processes. While it manifests as a massive water wave, its root cause lies in the displacement of the seafloor. In contrast, cyclones, floods, and droughts are hydro-meteorological or climatological hazards driven by atmospheric conditions and weather patterns. This distinction is important for determining which scientific agencies should lead monitoring and early warning efforts.

108. (B) Risk reduction
Risk mitigation is a proactive approach focused on reducing the potential adverse impacts of hazards, making it synonymous with risk reduction. Both terms encompass structural and non-structural measures taken before a disaster to decrease vulnerability and exposure. The goal is to ensure that even if a hazard occurs, its destructive impact on lives and property is minimized. This differs from risk transfer, such as insurance, or risk acceptance, as it actively seeks to lower the physical and social susceptibility to harm.

Click Here to Buy book on Amazon

109. (C) The predicted magnitude of the next earthquake.
Coping capacity refers to the internal strengths and resources a community has to manage a crisis. Stored food, strong social networks, and local knowledge of evacuation routes are all functional components of this capacity. However, the predicted magnitude of a future earthquake is a characteristic of the hazard itself, not a capacity of the community. While knowing the hazard helps in planning, the actual capacity lies in the tools and skills the community uses to respond when that hazard occurs.

110. (D) All of the above
India's diverse geography results in distinct hazard profiles for different regions. The Himalayas face high seismic risk, the long coastlines are prone to cyclones, the central plateau frequently experiences droughts, and the Gangetic plains are highly vulnerable to floods. This multi-hazard environment requires a decentralized and region-specific approach to disaster management, where each area's unique vulnerabilities are addressed through tailored mitigation, preparedness, and response strategies designed to handle the specific threats that are most likely to occur there.

111. (D) Scale of adverse impact on society.
The primary difference between a hazard and a disaster is the scale of the impact. A hazard is a potentially damaging event, but it only becomes a disaster when it strikes a vulnerable population and causes widespread disruption that exceeds their ability to cope using their own resources. A major storm in an empty ocean is a hazard, but the same storm hitting a coastal city is a disaster. This focus on human and social impact is central to defining and managing disasters.

112. (B) The understanding of the disaster-development nexus.
The disaster-development nexus is a critical concept in modern disaster management that recognizes how development choices can either create or reduce risk. Unplanned urbanization or deforestation for infrastructure can significantly increase vulnerability to floods and landslides. Conversely, sustainable development that incorporates risk assessment can build long-term resilience. This paradigm encourages planners to ensure that economic progress does not come at the cost of increased disaster susceptibility, effectively linking safety and resilience with the broader goals of national and regional growth.

113. (D) Biological
Epidemics and pandemics are classified as biological disasters because they are caused by the widespread outbreak of infectious diseases from bacteria, viruses, or other pathogens. These events impact human health and can lead to high mortality, social disruption, and economic loss. Managing biological disasters requires a focus on public health surveillance, vaccination, medical treatment, and quarantine measures. This distinguishes them from technological or chemical disasters, as the hazard involves living organisms that can spread and evolve within a population over time.

114. (B) 3, 1, 2, 4
A logical sequence for Hazard, Vulnerability, and Capacity Assessment begins by identifying the potential hazards that threaten a region. Next, it assesses the vulnerability of the population and assets to those hazards. Third, it evaluates the existing capacities and resources available to manage the risks. Finally, these inputs are combined to perform a comprehensive risk analysis. This systematic process ensures that all components of risk are understood, providing a solid foundation for designing effective and targeted disaster management strategies.

NODIA

115. (A) A failure originating from the interaction between human/social systems and technological systems.
Socio-technical disasters are characterized by failures that occur at the intersection of technology and human or social organizational structures. These disasters are rarely caused by technical malfunctions alone; they typically involve inadequate safety cultures, poor management, human error, or failures in regulatory oversight that allow a technical risk to escalate into a catastrophe. Understanding this interaction is crucial for improving safety in complex environments like nuclear power plants, chemical industries, and large-scale transportation systems, where human factors are as critical as engineering.

116. (A) Both A and R are true and R is the correct explanation of A.
Poverty is a major driver of vulnerability, as people with fewer resources often live in high-risk areas like floodplains or unstable slopes and inhabit poor-quality housing that cannot withstand hazards. Furthermore, the lack of financial reserves and insurance makes it much harder for these individuals to recover after a disaster strikes. This creates a cycle where disasters further impoverish the already vulnerable, highlighting the need for poverty-sensitive disaster risk reduction and social protection programs to build true resilience.

117. (C) A guarantee that the hazard will not cause any damage.
An Early Warning System is designed to provide timely information to save lives and reduce property damage, but it cannot guarantee that a hazard will cause no damage at all. Its effectiveness depends on scientific forecasting, reliable monitoring, and clear communication to people at risk. While the system empowers people to take protective actions, the physical force of many hazards—like a major earthquake or hurricane—may still cause unavoidable structural damage even if the population is successfully evacuated or warned.

118. (B) Conditions that increase community susceptibility to hazard impacts.
Vulnerability refers to the characteristics and circumstances of a community, system, or asset that make it susceptible to the damaging effects of a hazard. These conditions can be physical, such as poor construction; social, like marginalization; or economic, such as a lack of insurance. Vulnerability is a key component of risk because a hazard only causes a disaster when it strikes something that is susceptible to its force. Reducing these conditions is a primary goal of disaster risk reduction.

119. (B) Pre-disaster risk reduction
A fundamental shift in India's disaster management strategy is the move from a reactive, relief-focused approach toward a proactive emphasis on pre-disaster risk reduction. This shift involves integrating mitigation and preparedness into all levels of government planning to prevent or minimize the impact of hazards before they occur. By focusing on building resilience and reducing vulnerability, the country aims to lower the long-term human and economic costs of disasters, moving beyond simple emergency response to sustainable, systemic safety.

120. (B) 1, 2 and 4
Cyclones are correctly classified as hydro-meteorological hazards, earthquakes as geological, and epidemics as biological. However, industrial disasters are human-induced rather than natural. Understanding these categories is essential for assigning responsibility to the correct scientific and administrative agencies. For example, geological hazards are monitored by seismic authorities, while biological hazards are the responsibility of public health agencies. This classification ensures that specialized knowledge and appropriate resources are applied to manage the specific risks associated with each unique type of disaster.

121. (D) Bio-terrorism
Bio-terrorism is the deliberate release of viruses, bacteria, or other germs used to cause illness or death in people, animals, or plants. It is a specific type of biological disaster characterized by malicious intent. These agents, such as anthrax or smallpox, are chosen for their ability to spread rapidly and cause significant social and economic disruption. Managing this threat requires a combination of public health preparedness, sophisticated laboratory detection, and strong security measures to prevent the misuse of biological materials.

122. (C) Slow onset and prolonged duration.
Drought is a quintessential slow-onset hazard that develops gradually over months or even years due to a persistent lack of precipitation. Unlike rapid-onset events like flash floods, its impacts are cumulative and often only become apparent after a significant period. This prolonged duration can lead to widespread failure of agriculture, depletion of water resources, and long-term economic damage. Effective management requires continuous monitoring of meteorological and hydrological data to provide early warnings and implement sustainable water-saving measures before the crisis peaks.

Downloaded from www.pdf.tube

123. (B) The topography of the coastline and the height of the waves.
The damage potential of a tsunami is most significantly influenced by the height and energy of the waves and the specific topography of the affected coastline. Low-lying coastal areas and narrow bays can amplify wave height and increase the distance water travels inland, known as inundation. Factors like coastal defenses, natural barriers like mangroves, and the density of population and infrastructure in the inundation zone further determine the scale of the disaster. Topography is thus a key factor in tsunami risk mapping.

124. (A) Address the root causes of disaster risk embedded in societal systems.
Analyzing inherent and chronic vulnerabilities allows disaster managers to move beyond immediate symptoms and address the underlying socio-economic and political causes of risk. These long-term vulnerabilities, such as systemic poverty, lack of access to healthcare, and marginalized social status, determine why some groups are repeatedly more impacted than others. By targeting these root causes through development and policy changes, societies can achieve more sustainable and equitable risk reduction, effectively breaking the cycle that makes certain populations chronically susceptible to disaster impacts.

125. (B) 2 and 4
Disaster risk is a dynamic concept that is reduced by lowering vulnerability and is fundamentally zero if there is no exposure of people or assets to a hazard. It is not static, as social and environmental conditions change, and it is highly dependent on the magnitude of the hazard. Furthermore, adaptive capacity is a critical factor in determining vulnerability and risk. Understanding that risk is manageable through targeted actions on vulnerability and exposure is essential for modern, effective disaster risk reduction.

126. (B) Interaction between natural hazards and human-induced vulnerability.
A lightning fire spreading due to poor firebreaks and flammable materials is a perfect example of how a natural hazard (lightning) interacts with human-induced vulnerability (poor planning and construction). While the trigger is natural, the scale of the disaster is determined by human choices and conditions. This interaction is central to modern disaster theory, which argues that most disasters are not purely natural but are the result of hazards striking vulnerable human systems that have not been properly managed or mitigated.

NODIA

127. (B) Technology-driven approach
The establishment of the National Disaster Management Authority in India represents a major paradigm shift toward a more proactive, holistic, and technology-driven approach. This involves using modern tools like satellite monitoring, sophisticated early warning systems, and digital risk mapping to improve disaster management. By integrating scientific data with institutional frameworks, the NDMA aims to move away from purely reactive relief toward a systematic method of risk reduction and preparedness, leveraging technology to better protect the diverse population from recurring natural and man-made hazards.

128. (B) The use of available skills and resources to face and manage an immediate crisis.
Coping capacity is the ability of individuals and communities to use their current skills, resources, and knowledge to manage the adverse conditions of an emergency. It is an immediate, short-term response to a threat, such as using existing food stocks or following local emergency procedures. While resilience involves long-term adaptation and improvement, coping capacity is about the practical measures taken to survive and manage a situation right now. Recognizing and supporting these local capacities is a key part of effective community-based disaster management.

129. (A) P-4, Q-1, R-2, S-3
India's regional hazard profiles are highly diverse. The Andaman and Nicobar Islands are at significant risk from tsunamis due to their location near seismic subduction zones. The Gangetic plains are prone to recurring floods from large river systems. The central Deccan plateau frequently experiences agricultural droughts due to rainfall variability. The Himalayan region is one of the world's most seismically active areas. Correctly identifying these regional threats is essential for developing localized and effective

disaster management plans that address the most likely hazards in each specific area.

130. (B) Origin or cause
The primary classification of disasters into natural and human-induced categories is based on their origin or the cause of the hazard. Natural disasters are triggered by environmental processes like plate tectonics or weather patterns. Human-induced disasters result from human activities, such as industrial accidents, technological failures, or intentional acts. While the impacts of both may be similar, distinguishing their causes is essential for identifying the appropriate scientific expertise, regulatory frameworks, and preventive measures needed to manage the specific risks associated with each category.

131. (D) Volcanic eruption.
A volcanic eruption is a quintessential natural hazard caused by the Earth's internal geophysical processes, specifically the movement of tectonic plates and magma. In contrast, oil spills, building collapses due to poor construction, and terrorist attacks are all human-induced disasters because they originate from human error, negligence, or malicious intent. Understanding the root cause of a disaster is vital for determining legal responsibility, developing specific safety regulations, and establishing the most effective response protocols for different types of hazardous events.

132. (A) Both A and R are true and R is the correct explanation of A.
Resilience is a broader and more transformative concept than coping capacity. While coping capacity focuses on the immediate use of resources to survive a crisis, resilience involves the long-term ability of a system to learn from the experience, adapt its practices, and transform its structures to reduce future risk. A resilient community does not just recover to its previous state but evolves into a safer and more adaptive one. This emphasis on learning and growth makes resilience a proactive goal for sustainable disaster management.

133. (B) Calm weather and light winds.
The eye is a unique feature of a well-developed tropical cyclone, characterized by an area of relatively calm weather, light winds, and often clear skies at the center of the storm. It is surrounded by the eyewall, which contains the storm's most violent winds and heaviest rainfall. While the eye itself offers a temporary reprieve from the intense conditions, it is immediately followed by the opposite side of the eyewall as the storm passes, making it a dangerous and deceptive part of the system.

134. (B) A coastal village diversifying its economy to include tourism.
Diversifying an economy is a strong example of adaptive capacity because it represents a community's ability to adjust its social and economic structures to reduce sensitivity to a single hazard, like declining fish stocks or tsunamis. By having multiple sources of income, the village becomes more flexible and better able to moderate potential damages or cope with the consequences of a disaster. This proactive adjustment demonstrates how communities can actively build resilience by changing their long-term practices to suit an evolving risk environment.

135. (B) 2 and 3 only
CBRN disasters include technological events like nuclear power plant accidents and industrial incidents like the Bhopal Gas Tragedy. These are not exclusively intentional acts, as they often result from system failures or human error. Furthermore, socio-technical disasters involve the interaction between technology and social systems, not just social elements. Finally, CBRN hazards are human-induced, not geological. Accurate classification of these complex events is essential for developing the specialized emergency response and safety protocols needed to manage the unique risks associated with hazardous materials.

136. (A) Flash flood
A Glacial Lake Outburst Flood is a specific and highly destructive type of flash flood that occurs in mountainous regions. It is characterized by the sudden release of a massive volume of water when a glacial dam fails, causing rapid and catastrophic flooding downstream. These events are often triggered by avalanches, earthquakes, or rapid melting. Due to their sudden onset and high energy, they are classified as flash floods, requiring specialized monitoring and

Click Here to Buy book on Amazon

early warning systems to protect vulnerable communities in high-altitude catchment areas.

137. (C) Conducting evacuation drills and training.
Preparedness focuses on actions taken before a disaster to ensure that people and organizations are ready to respond effectively. Conducting evacuation drills and training are core preparedness activities because they build the skills and knowledge needed during an actual crisis. This differs from mitigation, which focuses on long-term risk reduction, or response and recovery, which occur during and after the event. By practicing their emergency plans, communities can significantly reduce panic and improve the speed and efficiency of life-saving actions when a hazard strikes.

138. (B) The failure of social structures to manage technology.
The term socio-technical disaster highlights that many catastrophes are not just technical malfunctions but result from the failure of human and social organizational structures to safely manage complex technology. This includes issues like inadequate training, poor safety culture, or regulatory failures that allow risks to escalate. By focusing on this interaction, disaster managers can identify systemic weaknesses beyond mechanical issues, leading to more robust safety protocols and organizational changes that address the human and social factors essential for the safe operation of modern technological systems.

139. (C) The Himalayan frontal arc and North-Eastern region.
The Himalayan frontal arc and the North-Eastern region of India are considered to have the highest seismic risk, often classified as Zone V in national maps. This high risk is due to the ongoing tectonic collision between the Indian and Eurasian plates, which releases immense energy through frequent and sometimes massive earthquakes. This geological setting requires the strictest building codes and high levels of community preparedness, as the potential for catastrophic ground shaking is significantly greater than in other parts of the country.

140. (C) Implementing a flood-plain zoning ordinance.
Non-structural mitigation focuses on using policies, laws, and public education to reduce disaster risk without physical construction. Implementing flood-plain zoning is a primary non-structural measure because it regulates land use to prevent people from building in high-risk areas. This approach addresses the root cause of risk by reducing exposure. Unlike structural measures like dams or embankments, non-structural strategies are often more cost-effective and environmentally sustainable, aiming to keep people away from the water rather than trying to control the water through engineering.

141. (A) 3, 1, 2, 4
The chronological sequence of a tsunami begins with sea floor movement, typically from an earthquake, which causes a sudden water displacement. This displacement creates energy that then undergoes wave propagation across the ocean at high speeds. Finally, as the waves reach shallow coastal waters, they slow down and increase in height, resulting in inundation as the water surges inland. Understanding this physical process is critical for the design of early warning systems that use seismic and sea-level data to predict coastal impacts.

142. (B) A nuclear weapon causes destruction through a nuclear chain reaction, while a dirty bomb uses conventional explosives to disperse radioactive material.
The fundamental difference lies in the mechanism of energy release and destruction. A nuclear weapon derives its massive explosive power from a nuclear chain reaction, creating blast, heat, and radiation on a colossal scale. A radiological dispersal device, or dirty bomb, uses regular explosives to scatter radioactive material over a localized area. While it causes conventional damage and radiation contamination, it does not involve a nuclear explosion. The dirty bomb is primarily used to cause panic and long-term environmental and health hazards through radiation exposure.

143. (C) The 'response' phase focuses on long-term rebuilding and economic recovery.
The statement regarding the response phase is incorrect; response focuses on immediate, short-term actions to save lives and meet basic needs during or right after a disaster. Long-

Downloaded from www.pdf.tube

term rebuilding and economic recovery are the primary goals of the recovery and reconstruction phase. Correctly distinguishing between these phases is essential for disaster management, as it ensures that resources and expertise are properly prioritized—first for life-saving and stabilization, and then for the much longer process of returning the community to a sustainable state of normalcy.

144. (C) The degree to which a system will be affected by or responsive to a hazardous event.
Sensitivity is a component of vulnerability that describes the degree to which a system—whether social, physical, or environmental—is affected by a specific hazard. It measures the potential impact based on the inherent characteristics of the system, such as how much a certain crop type is damaged by a specific amount of water shortage. Understanding sensitivity allows disaster managers to identify which specific elements are most susceptible to harm, helping them design more targeted and effective mitigation and protection strategies for those elements.

145. (B) 3 only
While natural hazards are physical processes, human activities like deforestation or poor urban planning can significantly exacerbate their impact, making the only correct statement that human activity can worsen hazards. Most natural hazards are not perfectly predictable, and historical data is essential for risk assessment. Furthermore, famine is a complex socio-economic event, not just a water shortage, and volcanism is a purely geophysical phenomenon, not man-made. Accuracy in these concepts is vital for developing effective and evidence-based disaster management strategies.

146. (A) Increased capacity building for response.
Establishing a dedicated, professional force for disaster response, such as the NDRF in India, signifies a major investment in capacity building for the response phase. This specialized force is trained and equipped to handle specific disasters like collapsed buildings, chemical leaks, or floods. By having a professional body ready to mobilize quickly, the speed and effectiveness of life-saving operations are significantly improved. This reflects a shift toward professionalism and systematic readiness, ensuring that the country can respond to major crises with high levels of expertise and specialized equipment.

147. (C) Technological Disasters
Industrial accidents, transportation crashes, and dam failures are all categorized as technological disasters because they originate from the malfunction of man-made systems, equipment failure, or human error in industrial and infrastructure operations. Unlike natural disasters, which are driven by environmental forces, these events are unintended consequences of the technological systems developed and managed by humans. Proper management involves strict safety regulations, regular maintenance, and specialized emergency response protocols designed to handle technical failures and the release of hazardous materials in these complex environments.

NODIA

148. (A) Both A and R are true and R is the correct explanation of A.
Community participation is essential for effective disaster risk reduction because local people are the first to respond to an event and possess invaluable traditional knowledge about their environment and its hazards. Involving the community in planning ensures that strategies are culturally appropriate, sustainable, and better supported by those they are meant to protect. This approach builds grassroots resilience and ensures that risk reduction measures are based on a deep understanding of local vulnerabilities and capacities, leading to more successful and enduring safety outcomes.

149. (B) Intense rainfall and deforestation on steep slopes.
Landslide potential is significantly increased by the combination of steep terrain and factors that destabilize the soil. Intense rainfall saturates the ground, increasing its weight and reducing internal friction, while deforestation removes the root systems that help hold the soil in place. Together, these factors create a highly unstable environment where a landslide can be easily triggered. Understanding this relationship is crucial for regional planning, as it highlights the importance of maintaining vegetation and managing drainage to prevent catastrophic slope failures.

150. (A) P-4, Q-3, R-1, S-2
Hazard is the potential for harm from a physical event, while vulnerability is the measure of susceptibility to that harm. Risk represents the probability and consequence of a hazard striking a vulnerable system. Resilience is the capacity of that system to recover, adapt, and transform following an event. Correctly matching these terms is fundamental to disaster management, as it provides a clear framework for assessing threats and designing strategies to improve safety and long-term sustainability for communities and their essential systems.

151. (C) Earthquake
An earthquake is a quintessential geophysical hazard because it originates from the physical processes of the Earth's interior, specifically the movement of tectonic plates and the release of energy in the lithosphere. In contrast, floods, cyclones, and droughts are hydro-meteorological hazards driven by atmospheric and climatic cycles. Distinguishing between these categories is important for disaster management as it determines which scientific disciplines and specialized monitoring technologies are required to detect, forecast, and provide early warnings for different types of hazardous events.

152. (B) sensitive
In the context of vulnerability, a household with a single source of income is considered more sensitive because its entire livelihood is at high risk if a hazard disrupts that specific income stream. A household with diversified income sources has multiple ways to survive and recover, making it less affected by a single negative event. This economic sensitivity is a key component of overall vulnerability, as it determines how a family can cope with and bounce back from the financial impacts of natural or man-made disasters.

153. (B) Conflict can increase vulnerability by displacing populations and destroying services.
Conflict significantly increases vulnerability by destroying essential infrastructure, disrupting healthcare and food supplies, and forcing people to flee their homes. Displaced populations often live in insecure, high-risk environments with limited access to resources, making them far more susceptible to the impacts of natural hazards. This intersection creates complex humanitarian emergencies where the combined effects of violence and environmental threats lead to much higher rates of injury, disease, and death, requiring specialized and multi-faceted disaster response and aid strategies.

154. (A) Only Statement I is correct.
The modern approach to the recovery phase emphasizes the concept of building back better, where the goal is not just to restore what existed before but to incorporate disaster risk reduction into the reconstruction process. This involves using higher building standards, improving infrastructure, and addressing the root causes of vulnerability that led to the original disaster. By learning from the event and rebuilding in a more resilient way, communities can significantly reduce their risk of future losses from subsequent hazardous events.

155. (C) It is a slow-onset phenomenon that develops over many years.
A Glacial Lake Outburst Flood is not a slow-onset phenomenon; rather, it is a sudden and rapid-onset event that can cause massive destruction in a very short amount of time. While the glacial lake itself may take years to form, the actual outburst happens when the containing dam fails abruptly, releasing a torrent of water downstream. This sudden nature makes GLOFs particularly dangerous, requiring sophisticated monitoring and rapid early warning systems to protect vulnerable communities in high-mountain valleys from catastrophic flood impacts.

156. (B) The inability of different warning systems to communicate with each other.
The Common Alerting Protocol addresses the challenge of technological silos by providing a standardized, digital format for emergency alerts that is compatible across all communication platforms. Previously, different systems used unique formats, making it difficult to share warnings quickly across multiple media. By using a uniform standard, a single alert can be disseminated simultaneously via sirens, radio, internet, and mobile networks. This interoperability ensures that critical life-saving information reaches a wide audience consistently and rapidly, regardless of the specific technology used by the recipients.

Click Here to Buy book on Amazon

157. (C) Moderate seismic risk and high vulnerability to droughts and floods.
The peninsular region of India, which includes the Deccan Plateau and surrounding areas, is generally characterized by moderate seismic risk compared to the Himalayas. However, it faces significant and recurring vulnerabilities to both droughts and floods. The region's agriculture depends heavily on a variable monsoon, leading to frequent moisture deficits, while its major river systems can cause extensive flooding during periods of intense rainfall. This dual threat requires integrated water resource management and resilient agricultural practices to protect the large population and its economic assets.

158. (D) The name of the agency responsible for relief.
Disaster risk assessment focuses on the interaction between three physical and social components: the nature of the hazard, the exposure of people and assets to that hazard, and their inherent vulnerability. The name of the agency responsible for relief is an administrative detail that does not determine the physical or social risk itself. While knowing the responding agency is important for coordination during the response phase, it is not a parameter used in the scientific calculation and mapping of disaster risk.

159. (D) All of the above
Human activities such as construction in floodplains, deforestation, and the release of toxic waste directly create or exacerbate hazards and increase societal vulnerability. Furthermore, long-term activities like burning fossil fuels drive climate change, which is leading to more frequent and intense extreme weather events. These examples illustrate how human choices in development, industry, and environmental management are intrinsically linked to the level of disaster risk faced by communities, necessitating more sustainable and risk-informed practices across all sectors of society.

160. (C) Rapid flow of a large mass of snow and ice down a slope.
An avalanche is a rapid and massive flow of snow and ice that breaks away from a mountainside and surges down a slope. It occurs when the accumulated layers of snow lose their stability, often triggered by weather changes or physical disturbances. Avalanches carry immense force, capable of burying people and destroying buildings and forests in their path. Managing this hazard requires specialized monitoring of snowpack conditions, controlled triggering for safety, and the development of effective rescue and recovery protocols in mountainous regions.

NODIA

161. (A) Using the concept of vulnerability to identify at-risk populations for targeted assistance.
Applying disaster management concepts involves using theoretical frameworks to solve practical problems. Using vulnerability assessment to identify which specific groups—such as the elderly, children, or those in poverty—are most at risk allows authorities to provide targeted assistance and prioritize resources for those who need them most. This evidence-based approach ensures that disaster planning is effective and equitable, moving beyond general assumptions to address the actual needs of different segments of the population before, during, and after a hazardous event.

162. (A) Both A and R are true and R is the correct explanation of A.
Coping capacity and resilience are related but distinct concepts. A community might have a strong coping capacity, allowing it to survive an immediate crisis using its current resources. However, if it does not learn from the event and change its long-term practices—the core of resilience—it will remain just as vulnerable to the next hazard. Resilience involves the transformative ability to adapt and improve, ensuring that each disaster leads to systemic changes that permanently reduce future risk rather than just temporary survival.

163. (B) Warm, moist air over tropical oceans rising and creating an area of low pressure.
Tropical cyclones are primarily driven by the energy released from the condensation of moisture in warm, rising air. This process occurs over tropical oceans where water temperatures are high, creating a powerful low-pressure system. As the air rises and cools, it forms intense thunderstorms, and the Earth's rotation causes the entire system to spin. This atmospheric engine generates the strong winds, heavy rainfall, and destructive storm surges that characterize cyclones, making them a significant

meteorological hazard for coastal regions worldwide.

164. (C) Response
The response phase of the disaster cycle begins immediately after a hazard strikes. It focuses on urgent actions to save lives, prevent further injuries, and meet the basic needs of the affected population. Key activities during this phase include search and rescue, emergency medical care, providing temporary shelter, and distributing food and water. This is a high-intensity period where rapid mobilization and coordination of emergency services are critical to stabilize the situation before the longer-term processes of recovery and reconstruction can take over.

165. (B) 2 and 3 only
CBRN disasters include technological failures like the Chernobyl nuclear accident and the Bhopal industrial chemical leak. These events are not always intentional, as they often result from system malfunctions or human error rather than malicious acts. Furthermore, socio-technical disasters involve the interaction between technology and social organizational systems, and CBRN hazards are human-induced rather than geological. Proper classification is essential for developing the specialized emergency response, medical care, and safety regulations needed to manage the unique risks posed by hazardous materials in different scenarios.

166. (B) Food
A famine is an extreme and widespread scarcity of food that leads to malnutrition, starvation, and an increase in mortality rates within a population. While often triggered by natural events like drought or pests, it is frequently a result of a combination of environmental and social factors, including conflict, poverty, and systemic failures in food distribution. Unlike localized food shortages, a famine is a large-scale disaster that necessitates significant humanitarian intervention and long-term efforts to restore food security and rebuild agricultural and economic systems.

167. (D) Avalanche - Man-made hazard
An avalanche is a natural hazard, not a man-made one, as it is a physical process involving the movement of snow and ice on mountainous slopes. While human activity can sometimes trigger an individual avalanche, the phenomenon itself originates from natural environmental and gravitational forces. In contrast, GLOFs are hydro-meteorological, volcanism is geophysical, and famines are complex socio-economic events. Accurate classification is fundamental for understanding the origin of hazards and for assigning responsibility to the appropriate scientific and administrative disaster management agencies.

168. (C) Mitigation
Mitigation is the quintessential proactive phase of disaster management, as it focuses on taking permanent actions to reduce or eliminate long-term risk before a disaster occurs. These measures, such as building stronger infrastructure or implementing land-use regulations, aim to ensure that hazardous events do not result in major catastrophes. By investing in mitigation during the non-disaster period, societies can lower their overall vulnerability and exposure, making it a much more sustainable and cost-effective strategy compared to relying primarily on reactive emergency response efforts.

169. (B) P-3, Q-4, R-1, S-2
Early Warning Systems are designed to provide timely alerts to populations at risk. A Hazard, Vulnerability, and Capacity Assessment is a tool used to diagnose and assess disaster risk components. The Common Alerting Protocol provides a digital standard for formatting and sharing emergency warnings across different technologies. Mitigation focuses on proactive measures to reduce potential damage from hazards. Correctly matching these terms is essential for understanding the diverse tools and strategies used in comprehensive, evidence-based disaster management and risk reduction efforts.

170. (C) Are long-term, persistent factors like poverty and marginalization.
Chronic vulnerabilities are long-term, systemic conditions that make certain groups or systems continuously susceptible to the impacts of hazards. Factors such as persistent poverty, lack of education, and social or political marginalization determine a community's baseline level of risk and its limited ability to prepare for or recover

Downloaded from www.pdf.tube

from disasters. Addressing these root causes is a primary goal of sustainable disaster risk reduction, as it requires integrated development strategies that improve overall social and economic well-being to permanently reduce disaster susceptibility for the most vulnerable.

171. (D) The seismic magnitude of the region.
The damage potential of a flood is determined by hydrological and land-use factors, such as the depth and velocity of the water, the duration of the inundation, and the types of buildings and activities present in the flood zone. While seismic magnitude is a key factor for earthquakes, it has no direct relationship to the destructive power of a flood. Understanding which specific parameters determine the impact of different hazards is essential for creating accurate risk maps and designing effective, hazard-specific mitigation and response plans.

172. (A) Collaborative governance for disaster management.
The move toward involving NGOs, community groups, and the private sector represents a shift to collaborative governance in disaster management. This approach recognizes that the government alone cannot handle all aspects of disaster risk and that diverse stakeholders bring valuable expertise, resources, and local knowledge. By working together, these groups can create more comprehensive, flexible, and sustainable disaster management strategies. This collaborative paradigm empowers communities and ensures that risk reduction is a shared responsibility across all sectors of society, leading to greater overall resilience.

173. (B) Removing root systems increases erosion and instability.
Deforestation is a major human factor that increases landslide risk, as it removes the vegetation whose root systems play a critical role in anchoring the soil and absorbing water. Without these roots, the soil becomes more susceptible to erosion and saturation during heavy rainfall, significantly reducing slope stability. This relationship highlights how human environmental management choices directly influence the severity of natural hazards, necessitating more sustainable land-use practices and reforestation efforts in vulnerable mountainous regions to prevent catastrophic and often life-threatening slope failures.

174. (D) Litigation
The four standard phases of the disaster management cycle are mitigation, preparedness, response, and recovery. Mitigation and preparedness occur before a disaster to reduce risk and build capacity. Response involves immediate actions during the event to save lives. Recovery focuses on long-term reconstruction and restoration. While litigation may follow a disaster if there is negligence or criminal activity, it is a legal process rather than a primary phase of the disaster management cycle itself. Correctly identifying the main phases is essential for systematic disaster planning and resource allocation.

175. (A) 1 (Response), 4 (Recovery)
Search and rescue is a quintessential response activity aimed at saving lives immediately after a hazard strikes. Providing counseling for survivors is a key part of the recovery phase, focusing on long-term emotional and social well-being as the community rebuilds. In contrast, family emergency plans are part of preparedness, and building codes are a primary form of mitigation. Correctly classifying these activities helps disaster managers ensure that appropriate resources and specialists are available at each specific stage of the comprehensive disaster management cycle.

NODIA

176. (A) The risk is reduced compared to an unprepared community in the same location.
While the hazard from an active volcano remains the same for any community in its proximity, the level of disaster risk is significantly influenced by preparedness and vulnerability. A well-prepared community that has effective early warning systems, evacuation plans, and resilient infrastructure has a lower risk profile than an unprepared one. This example illustrates that risk is not determined by the hazard alone, but by the interaction of the hazard with the community's readiness and capacity to manage the potential impacts effectively.

177. (C) The community's capacity to cope is overwhelmed, requiring external assistance.
An emergency is a serious situation that requires urgent action but remains within the capability of

local responders to manage. It becomes a disaster only when the scale of the destruction and social disruption is so great that the affected community can no longer cope using its own resources. At this point, external assistance from higher levels of government or international agencies is required. This capacity-based definition is central to disaster management, as it determines the formal thresholds for declaring disasters and mobilizing large-scale aid.

178. (B) Nuclear
In the acronym CBRN, which stands for Chemical, Biological, Radiological, and Nuclear, the "N" represents nuclear disasters. These events involve an uncontrolled nuclear chain reaction or the malfunction of nuclear technology, leading to massive releases of energy and radiation. Managing nuclear risks requires highly specialized expertise and equipment due to the unique scale of destruction and long-term environmental hazards involved. Understanding this sub-classification is essential for emergency planning in areas with nuclear power plants or other high-tech industries that use nuclear materials and technology.

179. (A) Both A and R are true and R is the correct explanation of A.
India's unique geo-climatic conditions, which range from the Himalayas to vast coastlines and arid deserts, combined with its high population density, result in a very diverse hazard and vulnerability profile. Different regions are prone to vastly different threats—such as earthquakes in the north, cyclones on the coast, and droughts in the interior. This regional variation is the primary reason why disaster management in India must be decentralized and tailored to the specific environmental and social risks present in each unique part of the country.

180. (A) Provide a factual basis for designing disaster risk reduction strategies.
The primary purpose of a Hazard, Vulnerability, and Capacity Assessment is to provide the empirical data and diagnostic information needed to design effective risk reduction strategies. By identifying which hazards are most likely to occur, which populations and assets are most susceptible to them, and what strengths are available to manage those threats, planners can create targeted and realistic disaster management plans. This evidence-based approach ensures that resources are used efficiently to address the most significant risks and build long-term community resilience.

181. (B) Molten rock (lava), ash, and gases.
Volcanism is a geophysical hazard characterized by the eruption of materials from the Earth's interior through a vent or crater. These materials include molten lava, volcanic ash, and various gases like sulfur dioxide. The impact of a volcanic eruption can be wide-ranging, from immediate destruction caused by lava flows and pyroclastic surges to long-term atmospheric effects caused by ash clouds. Monitoring volcanic activity involves measuring ground deformation, gas emissions, and seismic signals to provide early warnings and protect vulnerable populations living near active volcanoes.

182. (B) A greater emphasis on integrating climate change adaptation with disaster risk reduction.
A key recent development in disaster management is the recognition that climate change is increasing the frequency and intensity of extreme weather events. This has led to a major emphasis on integrating climate change adaptation with traditional disaster risk reduction. By combining these two fields, planners can develop more robust strategies that address both current risks and the long-term changes in hazard patterns. This integrated approach is essential for building sustainable resilience in a world where environmental conditions are becoming increasingly unpredictable and severe due to global warming.

183. (C) They are natural processes that become hazardous when they interact with human systems.
Natural processes such as earthquakes, floods, and storms are normal parts of the Earth's environmental and geological cycles. They only become natural hazards when they have the potential to impact human systems, assets, and lives. If these processes occur in uninhabited or perfectly resilient areas, they do not present a hazard or lead to disasters. This definition emphasizes that disaster risk is a social construct resulting from the intersection of natural

Click Here to Buy book on Amazon

forces and human vulnerability, exposure, and inadequate capacity to manage those forces.

184. (B) Socio-Technical Disaster
A major train derailment involving both technical signal failure and human operator error is a quintessential socio-technical disaster. It illustrates that the event was caused by the failure of a complex system where technology and human organizational factors interact. These disasters highlight the importance of safety culture, training, and robust management systems, as technical malfunctions are often exacerbated by human mistakes or systemic organizational weaknesses. Understanding this interaction is crucial for improving safety and preventing similar catastrophes in large-scale transportation and industrial systems.

185. (B) 2 and 3 only
Vulnerability is not static; it changes over time as social, economic, and environmental conditions evolve. It is determined by a combination of physical, social, and economic factors, and a strong economy can significantly reduce vulnerability by providing resources for mitigation and recovery. Furthermore, vulnerability is often hazard-specific, meaning a community might be vulnerable to floods but resilient against earthquakes. Accurate understanding of these dynamic and multi-faceted characteristics is essential for developing effective and targeted disaster risk reduction strategies for any population or system.

186. (B) The presence of people, livelihoods, and infrastructure in hazard-prone areas.
Exposure refers to the physical presence of human elements—such as people, buildings, services, and economic assets—in locations where they could be adversely affected by a hazard. It is a critical component of risk because if there is no exposure, a hazard cannot cause a disaster. Reducing exposure through land-use planning and relocation is a primary strategy for disaster risk reduction. Understanding exactly what is at risk and where it is located allows disaster managers to prioritize mitigation and preparedness efforts for those specific areas.

187. (B) Long-term restoration of services, infrastructure, and community life.
While the response phase focuses on immediate life-saving actions, the recovery phase is concerned with the long-term restoration of the community to a state of normalcy or a more resilient condition. This involves rebuilding damaged infrastructure, restoring the economy, providing long-term housing solutions, and supporting the social and emotional well-being of survivors. Recovery is a gradual process that can last for months or years, offering an opportunity to build back better by incorporating risk reduction into the reconstruction efforts.

188. (C) It is a series of waves with a very long wavelength.
A tsunami is not a single wave but a series of massive waves characterized by an exceptionally long wavelength, which allows them to travel across entire oceans with minimal energy loss. These waves are typically generated by large-scale water displacement from underwater earthquakes or landslides. As they reach shallow water, their speed decreases and their height increases dramatically, leading to destructive inundation when they surge inland. Their unique physical properties distinguish tsunamis from regular wind-driven waves, requiring specialized monitoring and early warning systems.

189. (C) A landslide triggered by an earthquake.
A landslide triggered by an earthquake is considered a natural disaster because both the secondary event (landslide) and the primary trigger (earthquake) are caused by geophysical environmental processes. In contrast, building collapses due to poor construction, chemical spills, and electrical fires are all categorized as man-made or human-induced disasters because they originate from human error, negligence, or system failures. Understanding whether a disaster is natural or human-induced is essential for determining legal accountability, designing safety regulations, and establishing the most appropriate prevention and response strategies.

190. (B) P-3, Q-4, R-1, S-2
Landslides are primarily characterized by slope failure and the downward movement of earth materials. Droughts involve a significant deficit in water supply, often leading to agricultural and environmental stress. Cyclones are intense tropical storms formed around low-pressure

NODIA

systems with rotating winds. Earthquakes result from seismic activity and the sudden release of energy in the crust. Matching these hazards with their core physical descriptions is fundamental for accurate risk assessment and targeted disaster management strategies for various regions and populations.

191. (C) Adapt, learn, and transform to a less vulnerable state.
Resilience is a transformative concept in disaster management that goes beyond mere survival or restoration. It emphasizes the capacity of a system to learn from the experience of a disaster and adapt its structures and practices to be safer in the future. Instead of simply returning to previous conditions—which may have included high vulnerability—a resilient community evolves into a less vulnerable state through continuous improvement and structural changes. this proactive process breaks the cycle of repeated disasters by building long-term, adaptive safety.

192. (B) Retrofitting a hospital to withstand earthquakes.
Disaster mitigation involves taking permanent, long-term actions to reduce the potential impacts of hazards before they occur. Retrofitting a hospital for earthquake resistance is a classic structural mitigation measure because it physically lowers the vulnerability of a critical service. Unlike response and relief activities like distributing blankets or providing temporary shelter, which happen during or after a disaster, mitigation aims to prevent or minimize damage, ensuring that essential infrastructure remains functional when it is needed most.

193. (A) The involvement of a toxic substance versus a living organism or its toxins.
The primary difference between chemical and biological disasters lies in the nature of the hazardous agent. Chemical disasters involve toxic industrial compounds or other non-living poisonous substances. Biological disasters are caused by pathogenic microorganisms like bacteria and viruses or the toxins they produce. This distinction is critical for emergency response, as chemical events require immediate decontamination and specialized antidotes, while biological events necessitate public health interventions such as vaccination, quarantine, and long-term medical surveillance to prevent the spread of infectious disease.

194. (B) 2, 1, 3
Hazards vary significantly in their speed of onset. An earthquake is quintessential rapid-onset, occurring in seconds with no warning. A drought is a slow-onset hazard that develops gradually over months due to a persistent lack of rainfall. A famine is often an even slower process, representing the cumulative, long-term socio-economic failure resulting from prolonged food scarcity and systemic issues. Understanding these different time scales is essential for developing appropriate early warning systems and management strategies that match the specific speed and nature of each disaster.

195. (A) 3 only
Adaptive capacity is the ability of a system to adjust its practices to moderate potential damages, making it the only correct statement. Disaster risk can be significantly reduced but rarely completely eliminated, and exposure is just one component of risk, not the entire definition. Furthermore, the Common Alerting Protocol is a digital data format, not a satellite, and addressing inherent vulnerabilities is a complex, long-term process rather than an easy task. Accuracy in these concepts is vital for professional and effective disaster risk management.

196. (B) Formalized, systematic, and accountable system.
The creation of legal and institutional frameworks for disaster management in India signifies a shift toward a more formalized, systematic, and accountable system. This means that disaster response and risk reduction are now mandated by law, with clearly defined roles and responsibilities for different agencies. By institutionalizing these processes, the country ensures that disaster management is no longer an ad-hoc emergency activity but a permanent and professional part of governance, leading to better planning, transparent resource use, and more effective protection for the entire population.

197. (D) A sudden, single-day event.
A famine is never a sudden, single-day event; rather, it is a slow-onset disaster that develops over a long period due to persistent food

NODIA

scarcity and systemic failures in distribution and access. It is characterized by widespread malnutrition, increased mortality, and severe social disruption. While it can be triggered by rapid events like floods, the transition to famine is a gradual process of escalating vulnerability and desperation. Understanding this slow development is essential for humanitarian agencies to provide timely intervention before the crisis reaches catastrophic levels.

198. (A) Both A and R are true and R is the correct explanation of A.
Classifying disasters is a vital part of effective management because different types of hazards—such as earthquakes, chemical spills, or pandemics—require vastly different specialized expertise, equipment, and response protocols. For example, a search and rescue team for building collapses has different skills than a medical team managing an infectious disease outbreak. Proper classification ensures that the right resources are mobilized and that emergency plans are tailored to the specific physical and social challenges presented by each unique category of disaster.

199. (A) A complex emergency
A complex emergency is a humanitarian crisis characterized by a combination of factors, typically including armed conflict, displacement of populations, and natural hazards, which together create high levels of mortality and suffering. In such situations, the presence of violence prevents or complicates the delivery of life-saving aid to people already suffering from environmental threats like drought. These emergencies require a multi-faceted international response that addresses both the immediate humanitarian needs and the underlying security and political issues driving the crisis.

200. (B) Vulnerability
Sensitivity is a key component of the broader concept of vulnerability, representing the degree to which a system or population is affected by a specific hazard. It measures the potential response based on the inherent characteristics of the system, such as how much a house is damaged by a certain wind speed or how a crop reacts to water shortage. By analyzing sensitivity alongside exposure and adaptive capacity, disaster managers can gain a comprehensive understanding of vulnerability, allowing them to design more effective and targeted risk reduction measures.

201. (C) Post-disaster reconstruction
An effective Early Warning System consists of four essential components: risk knowledge, monitoring and warning services, dissemination and communication, and response capability. These elements work together to provide timely information before a hazard strikes. While post-disaster reconstruction is a vital part of the recovery phase, it occurs after an event has already taken place and is not a component of the warning system itself. The goal of an EWS is to save lives and reduce damage by enabling proactive action before the disaster occurs.

202. (C) Both Statement I and Statement II are correct.
India's eastern coast is historically more prone to tropical cyclones than its western coast because the Bay of Bengal has higher sea surface temperatures and atmospheric conditions that are more conducive to the formation and intensification of storms. These factors create a high-hazard environment for coastal states like Odisha and Andhra Pradesh. This regional variation is a key consideration for national disaster management, requiring more extensive early warning systems and coastal protection measures on the eastern side to handle the greater frequency and severity of storms.

203. (B) A social system where certain groups are excluded from decision-making.
Inherent vulnerability refers to deep-seated social, economic, or political conditions that exist independently of any specific hazard. A social system that excludes certain groups from decision-making represents an inherent vulnerability because these marginalized groups are less likely to have their safety needs addressed in disaster planning. This systemic inequality makes them more susceptible to harm when a disaster occurs. Addressing these fundamental issues of justice and inclusion is essential for creating true resilience and ensuring that all members of society are equally protected from hazardous events.

204. (D) Guaranteeing that past events will repeat in exactly the same way.

Downloaded from www.pdf.tube

While studying the history of disasters provides invaluable data on patterns, trends, and lessons for the future, it cannot guarantee that past events will repeat in exactly the same way. Hazards are influenced by complex and changing environmental conditions, such as climate change, and vulnerabilities evolve as social and economic systems change. Therefore, historical data is used to inform risk assessments and improve strategies, but it must be combined with modern modeling and continuous monitoring to prepare for new and evolving threats.

205. (C) 1, 2 and 4
The Himalayas are indeed prone to avalanches, and Andhra Pradesh is highly vulnerable to tropical cyclones along its coast. Similarly, parts of the central Deccan plateau frequently experience severe droughts. However, Rajasthan is primarily an arid and semi-arid region where drought is the dominant hazard, rather than widespread flooding, although flash floods can occur. Accurate regional hazard mapping is essential for developing effective, localized disaster management plans that prioritize the most likely and destructive threats in each specific part of India's diverse geographical landscape.

206. (B) Provide immediate assistance to save lives and meet basic needs.
The primary objective of the response phase is to take urgent, short-term actions to save lives, protect property, and ensure the basic survival of the affected population immediately after a disaster strikes. Activities during this period include search and rescue, emergency medical care, and the distribution of food, water, and shelter. This phase focuses on stabilization and meeting the most critical needs before the community can move into the longer-term processes of recovery, reconstruction, and systematic risk reduction for the future.

207. (A) It involves the rapid movement of snow, ice, and debris.
An avalanche is a rapid flow of snow, ice, and often rock and soil down a mountain slope. It is a geomorphological hazard that occurs when a mass of snowpack loses its stability. This rapid movement carries immense energy, capable of destroying anything in its path and requiring specialized monitoring of snow conditions and rapid response for mountain safety. Unlike slow-onset disasters like droughts, avalanches are rapid events that pose an immediate threat to life and property in high-altitude and mountainous regions.

208. (A) P-2, Q-1, R-4, S-3
Hazards are categorized by their primary scientific origin. Earthquakes are geological as they stem from internal earth processes. Cyclones are meteorological events driven by atmospheric conditions and pressure. Droughts are climatological because they relate to long-term precipitation patterns and climate variability. Floods are hydrological, involving the movement and accumulation of water on the surface. Proper classification is essential for identifying the correct scientific agencies responsible for monitoring, forecasting, and providing early warnings for each specific type of natural hazardous event.

209. (B) Emphasizes the strengths and capacities of a community to adapt and transform.
Resilience is often preferred as a concept because it focuses on the positive strengths and capacities of a community rather than just its negative vulnerabilities. It emphasizes the proactive ability of a system to not only withstand and recover from a disaster but to learn, adapt, and transform into a safer and more robust state. This strengths-based approach empowers communities to actively manage their own risks and build long-term safety, moving beyond the simple goal of reducing susceptibility toward the more transformative goal of sustainable resilience.

210. (B) A human-induced technological disaster
The Chernobyl disaster was a catastrophic nuclear accident caused by flawed reactor design and serious human errors during a safety test. It is classified as a human-induced technological disaster because it originated from a failure in a man-made system rather than natural environmental processes. The event highlight the severe and long-lasting risks associated with complex technological systems and the need for strict safety regulations, transparent management, and specialized emergency response protocols to manage the unique environmental and health hazards posed by nuclear and radiological incidents.

NODIA

211. (D) All of the above
Hazard refers to a potentially damaging physical event or condition. Risk is the potential for losses when a hazard is realized in a vulnerable system. Vulnerability is the measure of susceptibility to that harm. Exposure describes the physical location of people and assets in the hazard zone. These four concepts are interconnected and essential for accurate risk assessment. Understanding their relationships allows disaster managers to design effective strategies that reduce risk by targeting vulnerability and exposure while preparing for the inevitable presence of natural or man-made hazards.

212. (D) Recovery
The concept of building back better is most relevant to the recovery phase, which follows the immediate response to a disaster. During this period of reconstruction and restoration, there is a unique opportunity to improve infrastructure, enhance building standards, and address the root causes of vulnerability that led to the original disaster. By incorporating risk reduction into the rebuilding process, communities can move beyond simple restoration to create a more resilient and safer environment, significantly reducing the impact of future hazardous events.

213. (B) Encroachment on river floodplains and destruction of wetlands.
While heavy rainfall is a natural trigger for floods, human activities like encroaching on river floodplains and destroying natural wetlands significantly exacerbate their impact. Floodplains provide natural space for water to overflow, and wetlands act as sponges that absorb excess rainfall. When these are destroyed or built upon, the water has nowhere to go, leading to much more severe and frequent flooding in human settlements. Managing this risk requires strict land-use planning and the preservation of natural ecosystems to maintain their essential flood-control functions.

214. (B) Lessen the potential adverse effects of a hazard.
The primary goal of any disaster risk mitigation measure is to proactively reduce or eliminate the negative impacts of a hazard before it occurs. This is achieved through structural actions, like building earthquake-resistant structures, or non-structural actions, like implementing land-use zoning and public education. By focusing on lowering vulnerability and exposure, mitigation ensures that when a hazard does strike, the resulting loss of life and property damage is minimized. It is a cost-effective strategy that builds long-term safety and resilience for all communities.

215. (C) 2, 3, and 4
Vulnerability is defined by the interaction of three key components: exposure, sensitivity, and adaptive capacity. Exposure determines whether people and assets are in the hazard zone. Sensitivity measures how much they will be affected by a certain hazard intensity. Adaptive capacity refers to their ability to adjust and moderate potential damages or cope with the consequences. While the hazard itself is the threatening event, vulnerability is an internal characteristic of the system that determines its susceptibility to the hazard's impact, requiring a focus on these three factors.

216. (C) To identify the potential magnitude and frequency of hazards.
Capacity assessment focuses on identifying the internal strengths, resources, and skills available within a community to manage and reduce disaster risks. This includes evaluating existing coping mechanisms and assessing the financial, material, and human resources available for risk reduction. Identifying the magnitude and frequency of hazards is the primary goal of a hazard assessment, which is a separate but related part of the overall risk assessment process. Combining both assessments provides a balanced view of the threats faced and the tools available to manage them effectively.

217. (B) Mainstreaming disaster risk reduction into the public consciousness.
A culture of prevention signifies a shift toward integrating disaster risk reduction into everyday thinking and long-term public planning. It moves the focus from reactive emergency response to proactive risk management, where citizens, businesses, and government agencies all play a role in identifying and reducing vulnerabilities. By making risk reduction a mainstream social and political priority, a culture of prevention ensures that communities are better prepared,

Click Here to Buy book on Amazon

more resilient, and actively working to minimize the potential for future disasters through continuous safety improvements and sustainable development choices.

218. (B) Political instability, conflict, and poor governance.
While drought can trigger food scarcity, a famine is often exacerbated by human factors such as political instability, conflict, and poor governance. These conditions can disrupt food distribution, prevent aid from reaching those in need, and divert essential resources away from food security programs. In such situations, the social and political system's inability to manage the moisture deficit leads to catastrophic outcomes. This illustrates that famines are complex disasters where natural hazards and social vulnerabilities intersect, requiring a multi-faceted response that addresses both environmental and political issues.

219. (A) Both A and R are true and R is the correct explanation of A.
Early Warning Systems are a critical component of disaster risk reduction because they provide the timely information needed for protective action. By giving people enough lead time to evacuate, secure their property, or activate emergency plans, these systems directly reduce the likelihood of death and injury. An effective system bridges the gap between scientific monitoring and public action, ensuring that accurate hazard information is communicated clearly and acted upon correctly by at-risk communities, making it a powerful tool for saving lives and reducing overall disaster impact.

220. (B) Landslides involve rock and soil, while avalanches primarily involve snow and ice.
The fundamental difference between a landslide and an avalanche lies in the primary material being moved. A landslide involves the downward movement of rock, soil, and debris on a slope. An avalanche is specifically characterized by the rapid flow of a large mass of snow and ice, often in mountainous terrain. While both are rapid-onset geomorphological hazards driven by gravity and can be triggered by similar factors like steep slopes or earthquakes, their physical compositions require different monitoring techniques and specialized rescue and management strategies.

221. (B) Socio-technical disaster
A scenario where a failure in one technological system (the electrical grid) cascades to another (communications) and impacts a social service (hospitals) is a prime example of a socio-technical disaster. It demonstrates the complex interdependencies in modern society between technology and essential social organizations. These disasters highlight that the failure is not just mechanical but systemic, affecting the entire socio-technical structure that provides critical services. Managing such risks requires holistic planning that looks at system-wide vulnerabilities and the critical roles humans and organizational management play in ensuring technological reliability.

222. (C) Response
The response phase encompasses the critical actions taken during and immediately after a disaster to save lives and meet the urgent needs of the affected population. This includes activities such as search and rescue, emergency medical care, and providing food, water, and temporary shelter. It is a high-pressure stage characterized by the mobilization of emergency services and coordination of immediate relief efforts. The primary goal is to stabilize the situation and protect survivors before the longer-term processes of recovery and reconstruction can begin to return the community to normalcy.

223. (C) Disruption severe enough to overwhelm a community's capacity.
The most significant characteristic of a disaster is that the scale of its impact—including death, injury, and destruction—is so great that it exceeds the affected community's ability to cope using its own resources. While hazards can be minor or major, they only become disasters when they strike a vulnerable population and cause widespread disruption that necessitates external assistance. This capacity-based definition is central to disaster management, as it distinguishes disasters from regular emergencies and triggers the formal activation of higher-level government or international aid and support systems.

224. (B) 2 and 4 only
The Himalayas are highly prone to landslides, and the North-Eastern region of India is one of the most seismically active zones in the world.

NODIA

However, flood risk is not uniform across the country, as it is concentrated in major river basins like the Gangetic plains. Furthermore, India's long coastline is at significant risk from tsunamis, as evidenced by the 2004 disaster. Accurate hazard mapping is essential for specialized planning and mitigation efforts that address the specific, localized threats present in each unique part of the country's diverse geographical profile.

225. (B) 3, 4 and 5
Risk is correctly defined as the probability of a hazard event and its consequences, and a hazard is a potentially dangerous physical phenomenon. Furthermore, vulnerability can be significantly reduced by increasing the adaptive capacity of a community. However, resilience is a broader concept than just coping, as it includes learning and transformation. Similarly, exposure refers to the physical location of assets in the hazard zone, not their susceptibility. Clear and precise definitions of these terms are fundamental for accurate risk assessment and professional disaster management planning at all levels.

226. (B) Glacial Lake Outburst Flood (GLOF)
A Glacial Lake Outburst Flood is a specific type of high-energy flash flood caused by the sudden failure of a dam that holds back a lake formed at the edge of a glacier. These dams, often made of unstable ice or moraine debris, can breach due to rapid melting, avalanches, or seismic activity. The resulting sudden release of a massive volume of water causes catastrophic flooding downstream, representing a major hazard for communities in high-mountain regions. Specialized monitoring of glacial lakes and early warning systems are essential for managing this unique and destructive threat.

227. (B) Understand the context and patterns to inform future practice.
The primary aim of studying the history of disasters is to analyze past events to identify hazard patterns, recurring vulnerabilities, and the effectiveness of previous management strategies. By understanding what has happened before, disaster managers can create more evidence-based risk assessments and improve future mitigation, preparedness, and response plans. This historical perspective is essential for learning from successes and failures, ensuring that new safety measures are grounded in the actual experiences of a region and that the same errors are not repeated in subsequent disaster management efforts.

228. (C) A severe drought affecting a region.
A drought is categorized as a natural hazard because it originates from environmental and climatological processes, specifically a prolonged lack of precipitation. In contrast, industrial fires, building collapses due to structural flaws, and acts of bio-terrorism are all human-induced disasters because they result from human activity, negligence, or malicious intent. Understanding the root cause of a hazard is essential for determining appropriate prevention strategies, assigning legal accountability, and establishing the most effective specialized response protocols for different types of natural and man-made hazardous events in any given society.

229. (A) P-2, Q-3, R-1, S-4
Mitigation involves proactive legal measures like building laws to reduce long-term risk. Preparedness includes practical readiness activities like conducting drills before an event occurs. Response focuses on immediate life-saving aid, such as distributing relief food during a disaster. Recovery involves the long-term process of rebuilding, such as reconstructing a school after the crisis has passed. Correctly matching these activities with their corresponding phases is fundamental for systematic disaster management, ensuring that resources and expertise are properly applied at the right time in the disaster cycle.

230. (C) Coping Capacity
Coping capacity is the ability of individuals, organizations, and communities to use their available skills and resources to face and manage the immediate adverse conditions of an emergency or disaster. It is a short-term, practical response to a crisis, such as a village following established protocols or using local food stocks. While resilience involves long-term learning and transformation, coping capacity is about the immediate strengths used to survive and manage a threat. Recognizing and enhancing these local capacities is a key component of effective community-based disaster risk reduction and response.

Downloaded from www.pdf.tube

231. (C) The 2004 Indian Ocean Tsunami
The Indian Tsunami Early Warning System was established in direct response to the catastrophic 2004 Indian Ocean Tsunami, which highlighted the urgent need for a sophisticated monitoring and alerting network in the region. The system uses a network of seismic stations, bottom pressure recorders, and tide gauges to detect tsunamis in real-time and provide timely warnings to coastal communities. Its creation represents a major investment in technology-driven disaster management, significantly improving India's ability to protect its long coastline from the rare but potentially devastating threat of a major tsunami event.

232. (B) Vulnerability
A poorly maintained building in a seismically active zone represents a high level of physical vulnerability because its inherent characteristics make it more susceptible to damage from ground shaking. While the hazard (the earthquake) is high due to the location, the vulnerability is a result of the building's condition. Reducing this vulnerability through retrofitting or regular maintenance is a key mitigation strategy. This example illustrates that disaster risk is determined by both the presence of a hazard and the susceptibility of the assets exposed to it, making vulnerability a manageable component of risk.

233. (B) Calm weather and light winds.
The eye is a well-known feature of a strong tropical cyclone, characterized by an area of relatively calm weather, clear skies, and light winds at the center of the rotating storm system. It is immediately surrounded by the eyewall, which contains the storm's most violent winds and heaviest rain. While the eye offers a deceptive and temporary period of calm as it passes over an area, the intense conditions of the opposite side of the storm follow quickly. Understanding this structure is essential for accurate meteorological forecasting and public safety warnings.

234. (B) Only Statement II is correct.
While many natural hazards, like earthquakes or cyclones, cannot be prevented by human intervention because they are driven by planetary environmental processes, the risk they pose can be significantly mitigated. This is achieved by reducing the vulnerability and exposure of the population through measures like building stronger infrastructure, implementing land-use planning, and improving community preparedness. Modern disaster management focuses on managing the human and social components of risk to minimize the destructive impacts of inevitable natural forces, effectively preventing hazardous events from becoming large-scale social and economic disasters.

235. (B) Human-Induced Disasters
The classification of disasters into Chemical, Biological, Radiological, and Nuclear (CBRN) is a specific sub-category of human-induced disasters. These events originate from human activity, including industrial accidents, technological failures, or intentional acts of terrorism and warfare involving hazardous materials. While their impacts can be environmental, their cause is linked to the man-made handling of these substances. This classification is essential for developing specialized emergency response protocols, decontamination procedures, and medical treatments that are unique to the risks posed by each different type of hazardous material.

NODIA

236. (A) Resist, absorb, recover from, and adapt to the effects of a hazard.
Resilience is the capacity of a system, community, or society to resist, absorb, and recover from the impacts of a hazard in a timely and efficient manner, while also possessing the ability to learn and adapt for future safety. It is a proactive and transformative concept that focuses on strengthening social and physical systems so that they not only survive an event but evolve into a more secure and less vulnerable state. Building resilience is a fundamental goal of modern disaster risk reduction, linking immediate survival with long-term adaptive sustainability.

237. (B) A community's long-term lack of access to healthcare and education.
Chronic vulnerability refers to long-term, persistent factors like a lack of access to healthcare and education that make certain populations continuously more susceptible to the impacts of various hazards. These conditions are deeply embedded in the social and economic structure and exist independently of any specific disaster

event. Addressing chronic vulnerability requires long-term development interventions that improve overall well-being and social protection. By targeting these root causes, societies can permanently reduce the baseline level of risk and improve the capacity of the most vulnerable groups to manage future disasters.

238. (A) Both A and R are true and R is the correct explanation of A.
The paradigm shift in India's disaster management from a relief-centric to a holistic approach signifies a major strategic change. This involves moving beyond providing only post-disaster aid to integrating risk reduction into national development planning and prioritizing proactive measures like preparedness and mitigation. This comprehensive approach recognizes that the best way to manage disasters is to prevent them from occurring or to minimize their impact through long-term planning, building resilience, and reducing systemic vulnerability across all sectors of society, resulting in a safer and more sustainable national future.

239. (B) The sudden release of stress along faults in the Earth's crust.
The fundamental cause of an earthquake is the sudden release of accumulated mechanical stress along a fault line in the Earth's lithosphere. As tectonic plates move, they often stick at their edges, causing stress to build up until it exceeds the strength of the rock. At that point, a rapid slip occurs, releasing energy in the form of seismic waves that travel through the ground. Understanding this geological process is essential for seismic monitoring, developing accurate risk maps, and designing the earthquake-resistant infrastructure needed to protect lives and property.

240. (B) Preparedness
An Early Warning System is a quintessential preparedness measure because it focuses on building the capacity to respond effectively to an approaching hazard. By providing timely information, an EWS allows people and organizations to activate their emergency plans, evacuate at-risk areas, and secure property before the disaster strikes. While it relies on scientific monitoring (which can inform mitigation), its primary function is to ensure readiness and facilitate rapid, life-saving actions during the critical period just before a hazardous event, significantly reducing the potential for injury and death.

241. (C) 1, 2 and 3
Disaster risk is a dynamic function of three main factors: it is directly proportional to both the magnitude of the hazard and the level of vulnerability of the system, while it is inversely proportional to the coping capacity. This means that as capacity increases, the overall risk decreases. However, risk is fundamentally zero if there is no exposure of people or assets to the hazard. Understanding these proportional relationships allows disaster managers to design effective strategies by focusing on reducing vulnerability and exposure while building internal capacities to manage inevitable hazards.

242. (C) Biological
A pandemic like COVID-19 is classified as a biological disaster because it is caused by the widespread outbreak of a pathogenic microorganism—in this case, a virus—that causes extensive illness and death across a large population. Biological disasters can occur naturally, through accidents, or intentional acts, and they require specialized public health responses including surveillance, vaccination, and medical treatment. This distinguishes them from chemical or nuclear disasters, as the hazard involves a living or replicating biological agent that can spread through social contact and environmental factors over vast distances.

243. (C) Hazard assessment
Hazard assessment is the systematic process of identifying the types of threatening physical events that could impact a region, along with their likely frequency, severity, and potential magnitude. This assessment uses historical data and scientific modeling to create a clear picture of the specific threats, such as earthquakes, floods, or cyclones, that a community must prepare for. It provides the essential physical foundation for the broader risk assessment process, which then combines this information with vulnerability and exposure data to determine the overall potential for loss and damage.

244. (D) Recovery

Click Here to Buy book on Amazon

Recovery is the gradual, long-term phase of disaster management that begins after the immediate response. It focuses on returning the affected community to a state of normalcy or a more resilient condition through the restoration of services, infrastructure, the economy, and the social well-being of survivors. This phase can last for months or years and provides an opportunity to build back better by incorporating risk reduction into the rebuilding process. Effective recovery ensures that the community is not only restored but also made more robust against future hazardous events.

245. (C) 1, 2, 3 and 5
Natural hazards include geological, hydro-meteorological, and biological phenomena, as well as rare extra-terrestrial events like meteorite impacts. These are all driven by environmental processes beyond direct human control. In contrast, technological hazards are human-induced, originating from the failure of man-made systems and infrastructure. Correctly identifying natural hazards is essential for understanding their origins in earth systems and for developing the specialized scientific monitoring and forecasting techniques needed to provide early warnings and protect vulnerable populations from these inevitable physical forces that shape our planet's environment.

246. (B) A hazard is the potential for harm, while risk is the probability of harm occurring.
A hazard is an inherently dangerous physical event or condition—like an earthquake or a storm—that has the potential to cause harm. Risk is the more complex concept representing the probability that the hazard will actually result in losses and damage when it strikes a specific vulnerable and exposed population. In disaster management, risk is often calculated as a function of the hazard's probability and its expected consequences. Understanding this distinction is vital for accurate assessment, as it separates the physical threat from the social and economic potential for disaster.

247. (B) An open, non-proprietary standard for exchanging public warnings.
The Common Alerting Protocol is an open, non-proprietary digital format used to exchange all-hazard emergency alerts and public warnings across multiple communication platforms. It provides a standardized structure for warning messages, ensuring that they can be easily shared and understood by different technologies such as sirens, radio, television, and the internet. This interoperability allows a single alert to be disseminated simultaneously to a wide audience through various channels, making it a critical tool for ensuring consistent, rapid, and effective early warning for diverse populations facing various hazardous events.

248. (C) Droughts and Floods
India's vast agricultural sector is most directly vulnerable to the recurring hydro-meteorological hazards of droughts and floods. These events are linked to the high variability of the seasonal monsoon, which can lead to either severe moisture deficits or extensive inundation of fertile land. Both hazards cause significant crop failure, livestock loss, and economic hardship for millions of people. Managing this vulnerability requires integrated water resource management, the development of resilient agricultural practices, and robust crop insurance systems to protect the essential food security and livelihoods of the agrarian population.

249. (B) Tectonic plate movement
Human-induced disasters are caused by factors such as human error, negligence, system failures, or malicious intent, all of which are directly linked to human activities. Tectonic plate movement, however, is a natural geophysical process that occurs deep within the Earth's interior and is the primary cause of earthquakes and volcanism. While human actions can increase the impact of these natural events, the plate movement itself remains a quintessential natural hazard. Distinguishing between human-induced and natural causes is essential for developing the appropriate legal, scientific, and administrative strategies for disaster management.

250. (A) P-4, Q-1, R-2, S-3
Different regions of India face distinct hazard profiles based on their geography and climate. The North-Eastern states are located in high seismic zones, making them prone to severe earthquakes. Odisha is frequently hit by tropical cyclones from the Bay of Bengal. Central Maharashtra often faces water scarcity and agricultural drought.

Downloaded from www.pdf.tube

The Lahaul-Spiti region in the Himalayas is highly susceptible to avalanches. Understanding these regional variations is crucial for localized disaster preparedness and effective mitigation planning, ensuring that resources are applied to manage the specific threats most likely to occur.

251. (B) A hazard is a potential source of harm, while risk is the likelihood of harm occurring due to that hazard interacting with vulnerability.
Hazards represent potential threats or processes that may cause harm to life or property. In contrast, risk is the synthesized probability of harmful consequences arising from the interaction between these hazards and vulnerable conditions. This distinction clarifies that a hazard is the source of danger, while risk quantifies the likelihood and severity of the resulting impact.

252. (A) The capacity of the affected community to manage the event with its own resources.
The fundamental difference between an emergency and a disaster lies in the adequacy of available resources. An emergency describes an event manageable within the community's existing capacity and skills. Conversely, a disaster occurs when the scale of the event exceeds local capabilities, necessitating external assistance to manage the consequences effectively and ensure a timely recovery for the affected population.

253. (C) The ability to adapt, transform, and recover efficiently post-hazard.
Resilience represents a comprehensive capacity that goes beyond the immediate use of available resources. It encompasses a system's ability to resist, absorb, accommodate, and adapt to hazard effects. Furthermore, it emphasizes the importance of transforming and recovering in a timely and efficient manner, ensuring that the community or system emerges stronger and more capable of handling future events.

254. (D) Exposure
Exposure identifies the tangible elements, such as individuals, property, and complex systems, situated within specific hazard-prone zones. In coastal settings, the presence of fishing industry workers, their boats, and supporting infrastructure directly indicates exposure to threats like cyclones. Identifying these elements is essential for assessing potential losses and developing strategies to protect those who are most at risk.

NODIA

255. (C) Hazard, Vulnerability, and Exposure.
Disaster risk is conceptualized through the dynamic interaction of three critical components. It arises when a potential hazard overlaps with elements that are exposed in a danger zone and possess specific vulnerabilities. Understanding risk as a synthesis of these factors allows for management strategies that address the source of danger, the exposure of assets, and the susceptibility of systems.

256. (B) Mitigation
Mitigation involves the implementation of long-term measures designed to eliminate or reduce the potential impact of hazards. These proactive efforts occur during the pre-disaster phase and include activities such as enforcing building codes or constructing physical defenses. By focusing on risk reduction before an event occurs, mitigation seeks to lessen the overall vulnerability of a community and its infrastructure.

257. (D) The mitigation phase, to guide long-term risk reduction measures.
Assessing vulnerability is a critical step within the mitigation phase of the disaster cycle. This analytical process identifies specific weaknesses in physical, social, or economic systems that increase susceptibility to harm. By understanding these vulnerabilities, decision-makers can design and implement effective long-term strategies aimed at reducing risk and enhancing the overall resilience of the community before disasters strike.

258. (A) The reconstruction efforts that integrate risk reduction.
The concept of building back better is a central principle of the reconstruction process within the post-disaster phase. It involves integrating mitigation measures into the restoration of infrastructure and services. By doing so, the community does not simply return to its previous state but improves its resilience, thereby reducing the risk of future disasters through more robust and sustainable planning.

259. (C) Conducting community-wide evacuation drills.

Preparedness activities are proactive measures taken during the pre-disaster phase to ensure an effective response. Typical examples include developing comprehensive evacuation plans, conducting community-wide drills, and providing training for emergency personnel. These actions do not stop a hazard from occurring but ensure that individuals and organizations possess the necessary skills and knowledge to act quickly and save lives.

260. (A) The end of one phase, particularly recovery, informs the beginning of the next mitigation phase.
The disaster cycle is viewed as a continuous process because the actions taken in one phase directly influence the next. Specifically, the recovery and reconstruction efforts following an event provide vital information and opportunities to implement new mitigation measures. This feedback loop ensures that disaster management remains an ongoing effort, where each experience helps to refine future risk reduction strategies.

261. (D) To provide a comprehensive understanding of disaster risk by integrating analyses of threats, susceptibilities, and strengths.
A Hazard, Vulnerability, and Capacity Assessment serves as a comprehensive tool to evaluate disaster risk at the local level. It integrates the analysis of potential threats with an examination of existing susceptibilities and community strengths. This holistic approach enables decision-makers to move beyond simple hazard identification, allowing for the prioritization of resources and the development of context-specific strategies.

262. (B) Capacity assessment, because it focuses on existing strengths and resources.
Capacity assessment is distinguished by its positive orientation, focusing on the inherent strengths and resources available within a community. It identifies skills, knowledge, social networks, and institutional systems that can be mobilized to handle adverse conditions. By highlighting these capabilities, this component complements the identification of risks and vulnerabilities, providing a more balanced and empowering view of community readiness.

263. (C) The prevalence of poorly constructed housing in low-income neighborhoods.
Vulnerability assessments focus on the conditions that increase the likelihood of damage from hazards. This process scrutinizes social and economic factors, such as the prevalence of substandard housing in low-income neighborhoods or lack of access to resources. Identifying these physical and societal weaknesses is essential for understanding why certain groups are more prone to suffering losses during a disaster.

264. (D) Holistic nature, which moves beyond a simple hazard-centric view.
The primary advantage of the HVCA methodology lies in its holistic nature, which represents a significant advancement over older, hazard-centric approaches. By examining vulnerability and capacity alongside potential threats, it provides a multidimensional view of risk. This comprehensive framework allows for a more nuanced understanding of how social, economic, and physical factors interact to determine the overall impact.

265. (A) Capacity assessment
Existing community assets, such as strong social networks and local teams trained in first aid, are evaluated during the capacity assessment component of an HVCA. This part of the analysis maps out the internal resources that can be used to withstand and recover from hazards. Recognizing these strengths is crucial for building on what a community already possesses to enhance resilience.

266. (B) Earthquakes and Volcanism
Geological hazards originate from processes occurring within the Earth's lithosphere or on its surface. Earthquakes, caused by the sudden release of seismic energy, and volcanism, involving the eruption of magma and ash, are primary examples of this category. These events are distinct from hazards related to atmospheric or hydrological processes, requiring specialized monitoring and building standards to mitigate their destruction.

267. (B) The containment structure of a lake formed by a glacier breaks.
A Glacial Lake Outburst Flood occurs when the natural dam containing a lake formed by a glacier fails suddenly. This failure results in

Click Here to Buy book on Amazon

the rapid release of a massive volume of water downstream, which can cause catastrophic flooding in mountain valleys. Understanding the mechanisms of these events is vital for mountain communities where the effects of climate change are increasing risk.

268. (A) Hydrometeorological hazard due to its manifestation as ocean waves.
While often triggered by geological events like submarine earthquakes, tsunamis are classified as hydrometeorological hazards because they manifest as a series of large ocean waves. This classification emphasizes their hydrological origin and the specific physical properties of the water displacement involved. Managing tsunami risk requires integrated systems that monitor both the seismic triggers and the subsequent movement of the water.

269. (C) Origin, as either natural or human-induced
The classification of disasters is primarily based on their origin, distinguishing between those caused by natural environmental processes and those induced by human actions. Natural hazards arise from geological, hydrometeorological, or geomorphological events. Human-induced disasters result from technological failures, accidents, or deliberate actions. This fundamental distinction helps in organizing specialized response efforts and developing appropriate mitigation strategies for different threats.

270. (D) Drought
Hydrometeorological hazards can result from either an excess or a deficit of water within the environment. While floods and tsunamis represent an excess of water, droughts are characterized by a prolonged deficiency of rainfall. This shortage leads to water scarcity and can have slow-onset but devastating effects on agriculture and ecosystems, eventually leading to widespread food shortages known as famines.

271. (C) The quality of building construction.
The damage caused by an earthquake depends on both natural seismic characteristics and human factors. While magnitude and local geology are natural variables, the quality of building construction is a critical human factor that determines the level of destruction. Improving structural integrity through rigorous building codes is a primary method for reducing the high potential for life and property loss.

272. (B) Cyclone
Cyclones are powerful low-pressure systems that develop over warm tropical waters. They are defined by their combination of high-velocity winds, torrential rainfall, and destructive storm surges. These hazards pose a significant threat to coastal areas, where they can cause widespread flooding, erosion, and infrastructure damage. Their predictable formation patterns allow for the development of early warning systems and evacuation plans.

273. (D) An earthquake occurring on the ocean floor.
Tsunamis are series of long-wavelength ocean waves typically triggered by sudden disturbances on the ocean floor. The most common cause is a submarine earthquake, which displaces a vast volume of water. As these waves approach shallow coastal areas, their height increases significantly, leading to massive inundation. Identifying seismic activity underwater is therefore essential for providing early warnings to vulnerable coastal populations.

NODIA

274. (A) The characteristic onset time and development speed of the hazard.
The viability and effectiveness of early warning systems are closely linked to the physical characteristics of a hazard, particularly its onset time. Rapid-onset events like earthquakes offer very little lead time for warnings, whereas slower-developing hazards like cyclones or droughts allow for more comprehensive preparation and evacuation. Understanding these temporal dynamics is crucial for designing response strategies that save lives effectively.

275. (C) Volcanism
Volcanism produces several dangerous elements, including lava flows and pyroclastic surges, but ash fall is particularly noted for its widespread impact. Volcanic ash can travel over vast distances, contaminating water supplies, damaging agricultural crops, and disrupting air travel by interfering with aircraft engines. These consequences highlight the need for regional monitoring and coordination to manage the far-reaching effects of eruptions.

276. (A) Floods are caused by an excess of water, while droughts are caused by a deficit.
Floods and droughts are contrasting hydrometeorological hazards related to water availability. Floods occur when there is an overflow of water beyond normal limits, often due to intense rainfall or storm surges. In contrast, droughts result from a prolonged deficiency of rainfall, leading to severe water shortages. Both hazards significantly impact agriculture and public health but through fundamentally different physical processes.

277. (D) Intense rainfall and human excavation activities.
Landslides involve the downward movement of rock and earth on sloped terrain. They can be triggered by natural factors such as intense rainfall or seismic activity. However, human activities like deforestation and excavation also play a significant role in destabilizing slopes. Understanding these diverse triggers is essential for effective land-use planning and implementing stabilization measures in vulnerable hilly or mountainous regions.

278. (B) Drought
Famine represents a widespread scarcity of food and is often a direct consequence of other hazards. Prolonged periods of drought, characterized by abnormally low rainfall, lead to catastrophic crop failure and water shortages. These slow-onset conditions can gradually deplete a community's resources and food supplies, eventually resulting in famine. Addressing the underlying causes of drought is therefore vital for security.

279. (C) Alpine regions
Avalanches are geomorphological hazards involving the rapid flow of large masses of snow and ice down mountainsides. They pose a critical threat primarily in alpine regions, where steep slopes and heavy snowfall create unstable conditions. These events can bury infrastructure, block transportation routes, and cause fatalities, necessitating specialized monitoring and management strategies in high-altitude environments to protect residents and visitors.

280. (D) Human activities like deforestation can trigger hazards such as landslides.
Effective land-use planning is a fundamental mitigation strategy because human interventions can significantly exacerbate hazard risks. For instance, activities such as deforestation and improper excavation on slopes can trigger destructive landslides. By regulating how land is used and protecting natural vegetation, planners can reduce the likelihood of these events, thereby protecting lives and property from avoidable human-induced geomorphological disaster events.

281. (A) The origin of the causal factors, being either natural processes or human action/inaction.
The fundamental distinction between natural and human-induced disasters lies in the origin of their causal factors. Natural hazards stem from environmental processes like geological shifts or climatic variations. Human-induced disasters, however, are caused directly or indirectly by human actions, errors, or system failures. Recognizing this difference is essential for determining legal responsibilities and developing targeted prevention and safety regulations.

282. (B) Technological failure is intertwined with organizational and social system failures.
A socio-technical disaster occurs when a technological failure is deeply intertwined with organizational, social, and political contexts. It is not merely a mechanical breakdown but the result of systemic issues such as poor safety culture, inadequate regulation, or economic pressures. This perspective acknowledges that technical systems operate within a social environment, and failures often arise from the complex interface between the two.

283. (B) A major train derailment caused by faulty track maintenance.
Technological disasters arise from accidents or failures in man-made systems, often due to human error or inadequate safety measures. A major train derailment caused by faulty track maintenance perfectly exemplifies this category. Unlike natural hazards, these events are rooted in the failure of technology or the management of that technology, highlighting the importance of rigorous maintenance schedules and safety oversight.

Downloaded from www.pdf.tube

284. (A) The underlying organizational culture and regulatory environment.
When examining a chemical plant explosion, a socio-technical perspective looks beyond the immediate mechanical failure of a valve. It investigates underlying factors such as organizational culture, budget cuts affecting maintenance, and the regulatory environment. This comprehensive analysis helps identify the root causes of the disaster, moving beyond simple technical explanations to understand the systemic social and managerial failures involved.

285. (C) It shifts blame away from individual human error to systemic issues.
Classifying a disaster as socio-technical is important because it shifts the focus from individual human error to broader systemic issues. By identifying failures in organizational structures, economic pressures, or poor regulation, this approach allows for more effective long-term prevention. It ensures that safety improvements address the root causes of accidents within the entire system rather than just blaming the operator.

286. (D) Chemical
Chemical disasters involve the release of toxic industrial substances into the environment. An accidental spill of such materials during transportation is a classic example of this type of CBRN event. These incidents can cause immediate health impacts and long-term environmental damage. Managing these events requires specialized response teams equipped with appropriate protective gear and decontamination tools to contain the hazardous substances.

287. (C) Pathogenic microorganisms or their toxins
Biological disasters are characterized by the release and spread of pathogenic microorganisms, such as bacteria or viruses, or the toxins they produce. These agents can cause widespread illness and death in human, animal, or plant populations. The challenge in managing these events lies in the invisible nature of the agents and the potential for rapid transmission across large geographic areas.

288. (B) The detonation of a device causing a blast and fallout.
While both involve radioactive materials, a nuclear disaster is distinguished by the detonation of a nuclear device. This leads to a devastating blast, intense heat, and widespread lethal fallout. Radiological disasters, by contrast, involve the release of radiation without a nuclear explosion, such as through a dirty bomb or a power plant accident. Nuclear events represent the most extreme scale of destruction.

289. (D) The difficulty of containing the rapid spread of the agent through populations.
A major challenge in managing biological disasters is the difficulty of containing the rapid spread of pathogenic agents through populations. Because microorganisms can be transmitted easily between people or through the environment, containment requires swift public health interventions, such as quarantine and vaccination. The speed at which these events unfold often overwhelms existing healthcare systems and requires highly coordinated international responses.

NODIA

290. (A) Radiological
A dirty bomb is a device that uses conventional explosives to disperse radioactive material over a wide area. It is classified as a potential cause of a radiological disaster because its primary harmful effect comes from the ionizing radiation emitted by the dispersed particles. Unlike a nuclear weapon, it does not produce a nuclear explosion but causes significant contamination and health risks for those exposed.

291. (C) The intrinsic degree to which a system is prone to being affected by a hazard.
Within the framework of vulnerability assessment, sensitivity refers to the intrinsic degree to which a system, community, or asset is prone to being affected by a specific hazard. It describes how much a system will change or be damaged when exposed to a threat. Understanding sensitivity is vital for identifying which parts of a society are most likely to suffer immediate impacts.

292. (A) High sensitivity to drought
A community that relies exclusively on rain-fed agriculture for its economic survival demonstrates high sensitivity to drought. Because the system's productivity is directly linked to rainfall patterns, any prolonged deficiency in water immediately

and severely impacts its functioning. This example illustrates how the specific characteristics of a community's livelihood can determine its level of susceptibility to environmental hazards and potential economic loss.

293. (D) Adaptive capacity
Promoting diverse income sources within a community is a strategy used to enhance its adaptive capacity. This capacity represents the ability of a system to adjust its practices, moderate potential damages, and cope with the consequences of a hazard. By having multiple ways to sustain themselves, individuals and families become less vulnerable to the failure of a single agricultural or industrial sector.

294. (B) A community's location on a tectonic fault line.
Inherent vulnerabilities are intrinsic characteristics that are often difficult to change, such as geographic location. A community situated directly on a tectonic fault line possesses an inherent vulnerability to earthquakes due to its physical placement. This is distinguished from chronic vulnerabilities, which are long-term societal conditions like poverty or lack of education that also contribute to overall risk and susceptibility levels.

295. (C) By reducing one or more components of risk, such as hazard, exposure, or vulnerability.
Disaster risk mitigation measures function by reducing one or more of the core components of risk: hazard, exposure, or vulnerability. Structural measures might decrease the physical impact of a hazard, while non-structural measures like zoning can reduce exposure by keeping people out of dangerous areas. Improving social conditions reduces vulnerability, collectively lowering the overall probability of harmful consequences from future disasters.

296. (D) The Himalayan region
India's diverse geography results in distinct regional hazard profiles. The Himalayan region is specifically identified as being highly prone to earthquakes and landslides due to its seismic activity and steep terrain. This area also faces risks from glacial lake outbursts. Understanding these specificities is essential for developing localized disaster management plans that address these prevalent threats and protect vulnerable mountain communities.

297. (A) The impact of a hazard can differ greatly between regions due to socio-economic factors.
The regional aspects of vulnerability in India imply that the impact of a single hazard can vary significantly between different areas. This variation is driven by differences in socio-economic conditions, infrastructure quality, and local institutional capacity. Consequently, a community with better resources and stronger social systems may experience much less damage from the same event than a more marginalized or impoverished community.

298. (B) A shift towards a proactive model centered on risk reduction and resilience.
The primary emerging paradigm in Indian disaster management is a shift from a reactive, relief-centric approach to a proactive model. This new focus emphasizes long-term risk reduction, preparedness, and the strengthening of resilience across all levels of government. By integrating risk considerations into mainstream development, the goal is to prevent disasters where possible and minimize their impact through more robust strategic planning.

299. (B) Complex and diverse, with significant regional variations in both hazards and vulnerabilities.
India's hazard and vulnerability profile is characterized as deeply complex and diverse. This is due to the country's vast geography, which includes coastlines, mountains, and river basins, each facing different natural threats. Furthermore, significant socio-economic disparities and high population densities create varying levels of vulnerability across regions, necessitating a nuanced and multifaceted approach to disaster risk management at all levels.

300. (A) Because the type and intensity of prevalent hazards vary significantly across the country.
Understanding the regional aspects of hazards in India is crucial because the type and intensity of prevalent threats vary significantly across the country. A strategy designed for coastal cyclones will not be effective for managing Himalayan earthquakes. Tailoring disaster management efforts to specific regional profiles ensures that

Click Here to Buy book on Amazon

resources are used effectively and that mitigation strategies match local risks and environmental conditions.

www.nodia.in

NODIA

CHAPTER 02

Research Methodology for Disaster Management

1. Which of the following best defines 'research' in an academic context?
(A) A collection of miscellaneous data gathered from various texts and online websites.
(B) A systematic investigation to establish objective facts and reach new conclusions.
(C) A process involving the summarization of authoritative texts on specific academic topics.
(D) A casual inquiry intended to satisfy curiosity without a formal, structured process.

2. From the perspective of scientific thought, what is a primary source of knowledge for empirical research?
(A) Direct observation and experimentation
(B) Intuition and personal beliefs
(C) Authoritative texts and traditions
(D) Logical deduction from established principles

3. Match the items in List I with the items in List II.
List I: (Type of Research)
P. Applied Research
Q. Action Research
R. Social Research
S. Participatory Research
List II: (Primary Goal)
1. Understanding societal patterns and structures
2. Empowering a community to investigate and solve its own problems
3. Finding a solution for an immediate problem faced by a specific group
4. Solving a specific, practical question and informing policy or practice
(A) P-4, Q-3, R-1, S-2
(B) P-3, Q-4, R-2, S-1
(C) P-1, Q-2, R-3, S-4
(D) P-2, Q-1, R-4, S-3

4. Which of the following is an INCORRECT statement regarding the purpose of a literature review?
(A) It helps in identifying the key concepts and theories related to the research topic.
(B) It helps the researcher to identify gaps in the existing body of knowledge.
(C) It provides a foundation for developing the theoretical framework of the study.
(D) It is primarily conducted to copy paragraphs from existing studies.

5. A researcher formulates the hypothesis: "Increased community participation in disaster drills leads to higher levels of preparedness." What type of hypothesis is this?
(A) Non-directional hypothesis
(B) Null hypothesis
(C) Directional hypothesis
(D) Interrogative hypothesis

NODIA

6. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : The reliability of a research tool refers to the consistency with which it produces the same results on different occasions.
Reason (R) : A research tool cannot be valid unless it is reliable.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

7. What is the primary purpose of a 'theoretical framework' in a research study?
(A) To document every single bibliography and article consulted by the author.

(B) To present the raw, unprocessed data points collected throughout the study.
(C) To detail the specific statistical formulas that will be applied during analysis.
(D) To provide the conceptual structure of theories upon which the research rests.

8. In the context of research design, what does 'validity' refer to?
(A) The degree to which a study accurately measures what it intends to measure.
(B) The consistency of the measurement instrument.
(C) The extent to which the research findings can be generalized to other populations.
(D) The degree to which the researcher followed ethical guidelines.

9. Consider the following statements about 'formulating a research problem':
a. The problem should be clear, specific, and unambiguous.
b. The problem must be entirely original and never before studied.
c. The feasibility of the research in terms of time and resources should be considered.
d. The researcher's interest in the topic is an important factor.
Which of the above statements are correct?
(A) a, c, and d only
(B) a, b, and c only
(C) b, c, and d only
(D) a, b, and d only

10. Which source of knowledge relies on logical reasoning and deduction from established premises?
(A) Rationalism
(B) Empiricism
(C) Authority
(D) Intuition

11. 'Action research' is primarily characterized by its focus on:
(A) Developing a grand universal theory.
(B) Describing the historical context of a social phenomenon.
(C) Testing hypotheses under controlled laboratory conditions.
(D) Solving local problems through a cyclical process of planning and reflecting.

12. The following are steps in formulating a research problem. Arrange them in a logical sequence.
I. Identify a broad field or subject area of interest.
II. Dissect the broad area into sub-areas.
III. Raise research questions.
IV. Formulate objectives.
V. Select a specific area of interest.
(A) I, II, V, III, IV
(B) I, III, II, V, IV
(C) V, I, II, IV, III
(D) II, I, V, III, IV

13. Identifying a 'gap area' from a literature review means:
(A) Finding a topic that has too much existing research.
(B) Locating a physical space in a library where relevant books are missing.
(C) Discovering an area or question that has not been adequately addressed in previous studies.
(D) Identifying contradictory findings that cannot be resolved.

14. The 'paradigm of research' refers to:
(A) The specific software tools utilized for complex quantitative data analysis.
(B) The physical document submitted to a university for a graduation requirement.
(C) The primary method used by an investigator to collect primary source materials.
(D) A set of fundamental beliefs and values that guide the research process.

15. Consider the following features of a research design:
a. It must be flexible and allow for modifications.
b. It should minimize bias and maximize the reliability of data.
c. It should be overly complex to demonstrate the researcher's skill.
d. It must specify the sources and methods of data collection.
e. It must provide a clear plan for data analysis.
Which of the above are essential features of a good research design?
(A) a, b, d, and e
(B) b, c, d, and e
(C) a, c, and d only

Downloaded from www.pdf.tube

(D) a, b, and e only

16. What is the fundamental difference between a law and a theory in research?
(A) A theory is a descriptive generalization, while a law is an explanation of that generalization.
(B) A law is a descriptive generalization, while a theory is an explanation of that generalization.
(C) A law is proven, while a theory is just a guess.
(D) Laws apply to natural sciences, while theories apply only to social sciences.

17. Which of the following is NOT a basic principle of research design?
(A) The principle of replication
(B) The principle of subjectivity
(C) The principle of randomization
(D) The principle of local control

18. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : A critical literature review goes beyond merely summarizing existing studies.
Reason (R) : It involves analyzing, synthesizing, and evaluating the strengths and weaknesses of the existing body of knowledge to identify gaps.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

19. In research, a 'working hypothesis' is best described as:
(A) A preliminary question to be investigated by the research team.
(B) The final concluding statement derived from an empirical study.
(C) A tentative assumption made to test logical or empirical consequences.
(D) A proven scientific fact established through rigorous investigation.

20. Which concept is related to the consistency and stability of a measurement over time?
(A) Validity
(B) Objectivity
(C) Generalizability
(D) Reliability

21. Consider the following statements regarding Participatory Research:
a. To generate knowledge exclusively for academic purposes.
b. To solve a problem relevant to a specific community.
c. To empower participants by involving them in the research process.
d. To produce research findings that lead to practical action and social change.
e. To maintain a strict separation between the researcher and the subjects.
Which of the above are considered primary goals of Participatory Research?
(A) a, b, and c only
(B) b, c, and d only
(C) a, c, and e only
(D) b, d, and e only

NODIA

22. "The history of scientific thought" involves the study of:
(A) The biographies of all famous scientists.
(B) The development of scientific knowledge, methods, and ideas over time.
(C) The chronological listing of scientific inventions.
(D) The philosophical debates unrelated to scientific practice.

23. A non-directional hypothesis:
(A) Predicts the exact statistical outcome of the primary research study.
(B) Claims there is no measurable relationship between investigated variables.
(C) Is strictly formulated as a direct inquiry toward the subject matter.
(D) States a relationship exists without specifying the nature or direction.

24. Match the items in List I with the items in List II.
List I: (Research Term)
P. Validity
Q. Reliability
R. Research Problem
S. Hypothesis

List II: (Description)
1. A statement of a relationship between two or more variables
2. The accuracy of a measure or procedure
3. A question or issue that is the focus of investigation
4. The consistency or repeatability of a measure

(A) P-4, Q-2, R-1, S-3
(B) P-2, Q-4, R-3, S-1
(C) P-1, Q-3, R-2, S-4
(D) P-3, Q-1, R-4, S-2

25. The primary need for a research design is to:
(A) Incorporate complex terminology to satisfy institutional requirements.
(B) Meet administrative standards without providing any practical utility.
(C) Provide a systematic plan of action for the entire research process.
(D) Exert control over all variables within a natural laboratory setting.

26. Which of the following is the most important feature of a good research design?
(A) It is suited to the research objective and uses resources economically.
(B) It is extremely rigid and does not allow for any deviation.
(C) It is the most expensive and time-consuming design available.
(D) It is a design that has never been used before.

27. Which of the following research approaches is correct?
(A) Qualitative research primarily focuses on numerical data and statistical analysis.
(B) Quantitative research emphasizes in-depth understanding of human behavior and experiences.
(C) Qualitative and quantitative approaches are mutually exclusive and can never be used in the same study.
(D) Mixed-methods research combines elements of both qualitative and quantitative approaches.

28. Developing a research plan is a crucial step that typically occurs:
(A) After data analysis is complete.
(B) After the research problem is defined and the literature review is conducted.
(C) Before the research problem has been formulated.
(D) During the final report writing phase.

29. What is the key characteristic of an experimental design?
(A) The in-depth study of a single individual or group over time.
(B) The collection of data through open-ended interviews and observations.
(C) The manipulation of an independent variable to observe its effect on a dependent variable.
(D) The reliance on historical documents and records.

30. Consider the following potential components of a research plan:
a. Statement of the research problem
b. Detailed budget and timeline
c. Description of data collection methods
d. Plan for dissemination of findings

Which of the above are valid components of a research plan?
(A) a and c only
(B) a, b, and c only
(C) b, c, and d only
(D) a, b, c, and d

31. In sampling, the term 'population' refers to:
(A) The entire group sharing common characteristics relevant to the researcher.
(B) Individuals residing within a specific national or administrative boundary.
(C) The specific group from which the investigator actually collects data.
(D) The physical list or registry from which a research sample is generated.

32. What is the primary difference between a questionnaire and an interview schedule?
(A) A tool used for face-to-face verbal inquiry vs. one for self-completion.
(B) A self-administered form vs. one filled by the researcher during an interview.
(C) Forms containing only closed questions vs. those using open-ended queries.
(D) Standardized forms for data entry vs. flexible guides for qualitative study.

Click Here to Buy book on Amazon

33. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.

Assertion (A) : Random sampling ensures that every member of the population has an equal chance of being selected for the sample.

Reason (R) : Random sampling is the best method to obtain a representative sample and reduce sampling bias.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

34. A variable that is presumed to cause a change in another variable is called a(n):
(A) Independent variable
(B) Dependent variable
(C) Confounding variable
(D) Intervening variable

35. The process of converting raw data into a machine-readable format for analysis is known as:
(A) Data interpretation
(B) Data processing
(C) Data generalization
(D) Hypothesis testing

36. Arrange the following steps of data processing in the correct logical order.
I. Coding
II. Editing
III. Tabulation
IV. Classification
(A) I, II, III, IV
(B) II, I, IV, III
(C) III, IV, I, II
(D) IV, I, II, III

37. A Type I error in hypothesis testing occurs when a researcher:
(A) Fails to reject a false null hypothesis.
(B) Rejects a true alternative hypothesis.
(C) Rejects a true null hypothesis.
(D) Fails to reject a false alternative hypothesis.

NODIA

38. The process of 'generalization' in research refers to:
(A) The creation of overly broad and simplistic conclusions.
(B) The extent to which findings from a sample can be applied to the larger population.
(C) The summary of the research report.
(D) The detailed description of a single case.

39. What is the primary purpose of an 'interview guide'?
(A) To provide a standardized script to be read word-for-word by the investigator.
(B) To maintain a directory of all participants scheduled for subsequent study.
(C) To act as the official final record of the observations and study findings.
(D) To outline key topics for semi-structured or unstructured verbal inquiries.

40. Which of the following is an example of a non-probability sampling technique?
(A) Convenience sampling
(B) Simple random sampling
(C) Stratified random sampling
(D) Cluster sampling

41. Consider the following ethical considerations in research:
a. Ensuring informed consent from participants.
b. Maintaining the confidentiality of data.
c. Fabricating data to support a hypothesis.
d. Providing credit to all contributors through authorship.
e. Ignoring potential harm to participants.

Which of the above are considered important ethical issues in research?
(A) a, b, and d only
(B) a, c, and e only
(C) c, d, and e only
(D) a, b, c, and d

42. What is the most effective way to avoid bias in research?
(A) By being aware of potential sources of bias and implementing strategies to minimize them.
(B) By selecting only those data that support the hypothesis.
(C) By conducting the research in complete

secrecy.
(D) By using only one source of data.

43. 'Academic integrity' in research fundamentally means:
(A) Publishing a large number of articles, regardless of quality.
(B) Agreeing with the findings of all previous researchers in the field.
(C) Using complex language and jargon to appear scholarly.
(D) Adhering to principles of honesty, trust, fairness, respect, and responsibility in all research activities.

44. Plagiarism in research refers to:
(A) Citing sources that disagree with your argument.
(B) Using the ideas or words of another person without giving them proper credit.
(C) Conducting research on a topic that has been studied before.
(D) Making a mistake in the citation format.

45. The principle of 'informed consent' requires that participants are:
(A) Provided financial compensation for their time spent in the formal study.
(B) Kept blind to the true research objectives to prevent participant bias.
(C) Informed of the purpose, risks, and benefits before agreeing to participate.
(D) Legally bound to remain in the investigation until all data is collected.

46. What is the primary privacy concern addressed by ensuring 'anonymity' in research?
(A) A promise from the investigator to keep identified personal records private.
(B) The use of alphanumeric codes to label identifiable participant information.
(C) Removing specific names from the final published research documentation.
(D) The inability of a researcher to link an identity to specific responses.

47. Which of the following is NOT a guideline for ethical research?
(A) Researchers must minimize risks and maximize benefits for participants.
(B) Research should be conducted in a way that respects the dignity of participants.
(C) Researchers can deceive participants whenever it is convenient for data collection.
(D) Participants should have the right to withdraw from the study at any time.

48. Match the items in List I with the items in List II.
List I: (Ethical Term)
P. Plagiarism
Q. Informed Consent
R. Confidentiality
S. Bias
List II: (Definition)
1. A systematic error in research that leads to distorted results
2. Protecting a participant's identity and personal information
3. The process of obtaining voluntary agreement from participants
4. Presenting someone else's work or ideas as one's own
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-2, S-1
(C) P-2, Q-1, R-4, S-3
(D) P-3, Q-4, R-1, S-2

49. Disaster research is a field that primarily focuses on:
(A) Studying the exclusive physical causes of seismic and volcanic events.
(B) The systematic study of disaster causes, effects, and risk management.
(C) Implementing early warning hardware for maritime tsunami detection.
(D) Documenting the historical chronologies of ancient famines and plagues.

50. 'Transdisciplinary research' in the context of disasters is best characterized by:
(A) Integrating knowledge from academic disciplines and non-academic stakeholders.
(B) Scholars from one field investigating the subject matter of another field.
(C) A sequential process of handing data from one department to another.
(D) A quantitative study using several tools within one specific discipline.

Downloaded from www.pdf.tube

51. Which of the following statements about methods in contemporary disaster research is correct?
(A) Contemporary disaster research relies exclusively on traditional survey methods.
(B) Qualitative methods have been completely replaced by computational models.
(C) New technologies like GIS, remote sensing, and social media analytics are increasingly used.
(D) Research is now only conducted in laboratories, not in the field.

52. In disaster and humanitarian settings, a 'mixed-methods' research approach is often valuable because it:
(A) Operates as the fastest and most inexpensive research methodology available.
(B) Removes the requirement for rigorous ethical oversight in crisis zones.
(C) Can be successfully executed with a smaller sample size than other designs.
(D) Combines qualitative depth with quantitative breadth for full understanding.

53. A quantitative approach to risk assessment would most likely involve:
(A) Collecting stories and narratives from disaster survivors.
(B) Conducting focus group discussions on community perceptions of risk.
(C) Calculating the probability of an event and the potential financial losses.
(D) Creating detailed ethnographic accounts of post-disaster life.

54. A qualitative approach to risk reduction might focus on:
(A) Developing complex mathematical models of flood inundation.
(B) Understanding local perceptions, cultural beliefs, and traditional knowledge related to hazards.
(C) Measuring the structural integrity of buildings in a seismic zone.
(D) Counting the number of people who have received disaster preparedness kits.

55. Which qualitative research approach focuses on understanding the lived experiences of individuals regarding a particular phenomenon, such as surviving a major disaster?
(A) Ethnography
(B) Grounded theory
(C) Narrative research
(D) Phenomenology

56. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : In disaster research, gaining access to affected communities can be ethically and logistically challenging.
Reason (R) : Researchers must navigate issues of trauma, vulnerability, and the urgent needs of the population, which can conflict with research objectives.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

57. A researcher aims to develop a new theory about community resilience by collecting and analyzing data from a post-disaster setting, without a pre-existing theoretical framework. This approach is most aligned with:
(A) Case study research
(B) Ethnomethodology
(C) Grounded theory
(D) Autobiography

58. What is the primary characteristic of Community-Based Participatory Research (CBPR)?
(A) A collaborative approach where community and researchers are equitable partners.
(B) Academic investigation conducted within a laboratory regarding community life.
(C) Treating community members as passive sources from which data is extracted.
(D) An investigation focusing solely on the archaeological history of a town.

59. Consider the following characteristics of research methods in disaster studies:
a. Use of surveys and questionnaires with large samples.

NODIA

b. Focus on in-depth interviews and personal narratives.
c. Analysis of data using statistical techniques.
d. Goal is often to test hypotheses and generalize findings.

Which of the above are key characteristics of quantitative research methods?
(A) a, b, and c only
(B) b, c, and d only
(C) a, c, and d only
(D) a, b, and d only

60. Research methods for Health Emergency and Disaster Risk Management (Health-EDRM) would likely NOT include:
(A) Epidemiological studies to track disease outbreaks post-disaster.
(B) Studies on the literary criticism of disaster-themed novels.
(C) Assessment of damage to hospital infrastructure.
(D) Research on the mental health impacts on first responders.

61. A study that uses satellite imagery to map the extent of flood damage is an example of which type of method in disaster research?
(A) Ethnographic method
(B) Narrative research method
(C) Geographical method
(D) Phenomenological method

62. What is the main purpose of 'disaster reconnaissance'?
(A) To coordinate and implement a long-term humanitarian assistance package.
(B) To develop a comprehensive, decades-long recovery plan for the region.
(C) To conduct periodic tests of local emergency disaster warning systems.
(D) To gather perishable data through a rapid assessment of disaster impacts.

63. An 'ethical dilemma' in disaster research refers to a situation where:
(A) The researcher has to choose between two equally unsatisfactory alternatives that both involve a conflict of ethical principles.
(B) The research funding is insufficient.
(C) The data analysis proves the hypothesis to be incorrect.
(D) The research findings are difficult to publish.

64. Which of the following best describes 'ethnography' as a research approach?
(A) The use of statistical models to identify emerging demographic trends.
(B) Studying a culture or social group through immersion and observation.
(C) The development of a theoretical framework based on numerical data.
(D) The review of archived government documents to construct a narrative.

65. Which of the following would be an example of a 'computational method' for disaster research?
(A) Conducting a focus group with survivors.
(B) Simulating earthquake effects on urban infrastructure using computer models.
(C) Writing an autobiographical account of a disaster.
(D) Manually coding interview transcripts.

66. A case study in disaster research involves:
(A) An in-depth investigation of a single unit like an event or community.
(B) A statistical survey of a large, random sample of the population.
(C) A controlled experiment to test a hypothesis.
(D) A theoretical discussion without any empirical data.

67. Which of the following is NOT a method of data collection?
(A) Observation
(B) Interview
(C) Hypothesis testing
(D) Questionnaire

68. The primary distinction between 'methodology' and 'methods' in research is:
(A) Methods provide the underlying justification while methodology is the tool.
(B) The two terms are synonymous and interchangeable in scientific literature.
(C) Methodology relates to numbers while methods relate to qualitative data.
(D) Methodology is the theory and justification, while methods are specific tools.

Click Here to Buy book on Amazon

69. What type of research is specifically designed to solve a practical problem and produce recommendations for action?
(A) Pure research
(B) Fundamental research
(C) Applied research
(D) Theoretical research

70. Which of the following statements about sources of literature for review is INCORRECT?
(A) Academic journals, books, and conference proceedings are primary sources.
(B) Personal blogs and social media posts are always considered reliable academic sources.
(C) Government reports and publications from international organizations can be valuable.
(D) Theses and dissertations are important sources for in-depth research.

71. Consider the following ethical scenarios in post-disaster research:
a. The risk of re-traumatizing survivors by asking them to recount their experiences.
b. The fairness of providing incentives for participation in a resource-scarce environment.
c. The potential for research to interfere with emergency response and relief efforts.
d. The obligation to share research findings with the affected community.
e. The need to get a paper published quickly for career advancement.
Which of the above are potential ethical dilemmas in post-disaster research?
(A) a, c, and e only
(B) c, d, and e only
(C) a, b, c, and d
(D) a, b, and e only

72. 'Ethnomethodology' is a qualitative approach that focuses on:
(A) The methods people use on a day-to-day basis to make sense of and accomplish their social world.
(B) The lived experiences of individuals.
(C) The cultural patterns of a large social group.
(D) The personal life story of the researcher.

73. A study examining the effectiveness of a new cyclone shelter design by comparing a community with the new shelter to a similar community without it is an example of what kind of research design?
(A) Phenomenological
(B) Narrative
(C) Experimental (or quasi-experimental)
(D) Grounded theory

74. 'Privacy concerns' in research are primarily about protecting:
(A) A person's right to control access to themselves and their personal information.
(B) The researcher's intellectual property.
(C) The research data from physical damage.
(D) The funding agency from public scrutiny.

75. The following are typical stages of a research process. Arrange them chronologically.
I. Data analysis and interpretation
II. Literature review and hypothesis formulation
III. Research report writing
IV. Data collection
V. Selection of research problem
(A) V, II, IV, I, III
(B) II, V, IV, I, III
(C) V, IV, II, I, III
(D) I, II, III, IV, V

76. The concept of 'paradigm' in scientific thought was prominently developed by:
(A) Karl Popper
(B) Thomas Kuhn
(C) Isaac Newton
(D) Auguste Comte

77. An 'autobiography' as a research approach involves the study of:
(A) A culture through participant observation.
(B) A community's history through archival records.
(C) An individual's life story written by that same individual.
(D) The experiences of others through interviews.

78. Which of the following is a key component of research methods for natural and environmental disasters?
(A) Analysis of literary themes in poetry.
(B) Understanding physical processes like

Downloaded from www.pdf.tube

seismology or hydrology.
(C) Study of ancient political systems.
(D) Understanding physical processes like seismology or hydrology.

79. A researcher studying how a local community in a coastal area interprets and responds to tsunami warnings based on their folklore and traditional practices is conducting what type of research?
(A) Ethnographic research
(B) Experimental research
(C) Quantitative risk assessment
(D) Computational modeling

80. What is a defining characteristic of 'social research'?
(A) It is conducted only in a laboratory.
(B) It focuses on understanding aspects of human society and social behavior.
(C) It deals exclusively with economic theories.
(D) It is always funded by private corporations.

81. Which of the following correctly identifies a pair of qualitative research approaches?
(A) Survey research and Case study
(B) Phenomenology and Ethnography
(C) Experimental research and Grounded theory
(D) Statistical analysis and Narrative research

82. In research, identifying and avoiding bias is a crucial aspect of maintaining:
(A) Objectivity and credibility
(B) Subjectivity
(C) The researcher's personal viewpoint
(D) A fixed and unchangeable research plan

83. Which of the following is the best example of 'perishable data' collected during disaster reconnaissance?
(A) Geological fault lines
(B) The census population of the affected town from the previous year
(C) The height of floodwater marks on buildings
(D) The number of hospitals in the region before the disaster

84. The 'significance' of a hypothesis refers to:
(A) The personal importance of the hypothesis to the researcher.
(B) The complexity of the statistical test used.
(C) The length of the research report.
(D) The probability that the observed result is due to chance.

NODIA

85. Which of the following research methods is most appropriate for exploring the complex social dynamics and power structures within a temporary shelter for displaced persons?
(A) A quantitative survey asking about satisfaction levels.
(B) A laboratory experiment on decision-making.
(C) A qualitative ethnographic study involving participant observation.
(D) A computational simulation of population movement.

86. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : Community-Based Participatory Research (CBPR) is particularly well-suited for disaster risk reduction.
Reason (R) : CBPR leverages local knowledge and fosters community ownership, which are critical for sustainable and effective risk reduction initiatives.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

87. What is a 'sample design' in the context of a research plan?
(A) The design of the final research report's cover page.
(B) The architectural layout of the research laboratory.
(C) The format of the questionnaire.
(D) The blueprint for selecting a portion of the population for study.

88. A 'Type II error' in hypothesis testing is also known as a:
(A) False negative
(B) False positive
(C) Sampling error

(D) Non-sampling error

89. Consider the following research tools and concepts:
a. Interview schedule
b. Generalization
c. Questionnaire
d. Interview guide
Which of the above are considered sources or tools for data collection?
(A) a, b, and c only
(B) a, c, and d only
(C) b, c, and d only
(D) a, b, and d only

90. In the context of disaster research, what is a primary ethical concern when working with vulnerable populations like children or the elderly?
(A) Ensuring extra protections are in place to prevent exploitation and harm.
(B) Ensuring they provide publishable data.
(C) Minimizing their time commitment.
(D) Getting them to sign legal waivers quickly.

91. 'Narrative research' as a qualitative approach involves:
(A) Analyzing numerical data from a large sample.
(B) Observing people's behavior in a natural setting without interacting with them.
(C) Developing a theory from data that has been systematically gathered and analyzed.
(D) Collecting and analyzing the stories that people tell about their experiences.

92. The first step in developing a research plan is typically:
(A) Choosing the statistical software.
(B) Clearly defining the research problem and objectives.
(C) Collecting the data.
(D) Writing the conclusion.

93. What distinguishes an 'interview guide' from an 'interview schedule'?
(A) The schedule is for qualitative research, while the guide is for quantitative research.
(B) The guide is self-administered, while the schedule is used by an interviewer.
(C) The guide is more flexible and open-ended, while the schedule is more structured and standardized.
(D) There is no functional difference between them.

94. Which sampling technique involves dividing the population into subgroups (strata) and then taking a random sample from each subgroup?
(A) Cluster sampling
(B) Simple random sampling
(C) Convenience sampling
(D) Stratified sampling

95. In Health-EDRM research, a study that assesses the surge capacity of hospitals in the event of a mass casualty incident is focused on which aspect?
(A) Response and recovery
(B) Mitigation and prevention
(C) Long-term development
(D) Historical analysis

96. Consider the following actions related to research conduct:
a. Properly citing all sources used in a literature review.
b. Inventing data points to make the results look better.
c. Changing a few words in a sentence from a source and claiming it as one's own.
d. Acknowledging collaborators and funding sources.
e. Misrepresenting methods to hide flaws in the research design.
Which of the above actions constitute a violation of academic integrity?
(A) a and d only
(B) b, c, and e only
(C) b and d only
(D) a, c, and e only

97. The concept of 'paradigm of research' is closely related to the researcher's:
(A) Data entry skills.
(B) Ontological and epistemological assumptions.
(C) Age and gender.
(D) Geographical location.

98. A 'critical literature review' requires the researcher to:

Click Here to Buy book on Amazon

(A) Systematically evaluate the quality, relevance, and contribution of existing studies.
(B) Only include literature that supports their own viewpoint.
(C) Criticize every author cited in the review.
(D) Create a simple annotated list of articles.

99. In the context of research, what is a 'variable'?
(A) A fixed and unchanging characteristic.
(B) A logical connector in a theoretical framework.
(C) A concept or characteristic that can take on different values.
(D) The final conclusion of the study.

100. Match the items in List I with the items in List II.
List I: (Data Collection Tool)
P. Questionnaire
Q. Interview Guide
R. Observation Checklist
S. Focus Group Guide
List II: (Typical Application)
1. Systematically recording behaviors in a natural setting
2. Guiding a group discussion to explore shared experiences
3. Large-scale survey with standardized, closed-ended questions
4. In-depth, semi-structured interview with an individual
(A) P-1, Q-2, R-4, S-3
(B) P-3, Q-4, R-1, S-2
(C) P-2, Q-3, R-1, S-4
(D) P-4, Q-1, R-2, S-3

101. The 'interpretation of data' is the phase of research where the researcher:
(A) Enters the raw numbers into a computer.
(B) Selects the sample from the population.
(C) Assigns meaning to the analyzed data and draws conclusions.
(D) Designs the questionnaire.

102. An important concept relating to research design that helps to minimize the effect of extraneous factors by randomizing their influence is:
(A) The principle of local control
(B) The principle of randomization
(C) The principle of replication
(D) The principle of bias

103. Which of the following is NOT a type of hypothesis?
(A) Directional
(B) Non-directional
(C) Null
(D) Definitional

104. A study that uses Geographic Information Systems (GIS) to overlay maps of hazard-prone areas, vulnerable populations, and critical infrastructure is an example of:
(A) A geographical method for disaster research
(B) A phenomenological study
(C) An autobiographical study
(D) A grounded theory approach

105. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : Plagiarism is considered a serious breach of academic integrity.
Reason (R) : It undermines the principles of intellectual honesty and the proper attribution of scholarship.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

106. In disaster and humanitarian settings, why is a qualitative approach often necessary?
(A) To understand context, experiences, and social processes that numbers cannot capture.
(B) It is always faster and less expensive than quantitative research.
(C) It is the only method that international aid agencies will fund.
(D) It does not require any prior training to conduct properly.

107. Which of the following is the most appropriate research method to understand the evolution of disaster management policy in a country over the last 50 years?
(A) An experiment

(B) A cross-sectional survey
(C) A phenomenological study
(D) A historical/documentary analysis

108. The development of a working hypothesis is a step that usually follows:
(A) Data analysis.
(B) The literature review and problem formulation.
(C) Report writing.
(D) The generalization of findings.

109. What is a key feature of 'action research' that distinguishes it from 'applied research'?
(A) Action research is done by academics, while applied research is done by practitioners.
(B) Applied research is not concerned with solving practical problems.
(C) It involves a cyclical process of reflection and action by the practitioners themselves.
(D) Action research does not use any systematic methodology.

110. Which statement best reflects the ethical considerations required in disaster reconnaissance?
(A) Researchers should prioritize data collection above all else, including survivor well-being.
(B) Informed consent is not necessary because of the urgency of the situation.
(C) Perishable data is not important enough to warrant rapid deployment of research teams.
(D) Researchers must "do no harm" and minimize their footprint on the community.

111. The process of constructing a questionnaire should involve all of the following EXCEPT:
(A) Purposely phrasing questions to lead respondents to a desired answer.
(B) Using clear and unambiguous language.
(C) Ensuring questions are directly relevant to the research objectives.
(D) Pilot-testing the questionnaire before full-scale deployment.

112. In the context of scientific thought, what does a 'paradigm shift' signify?
(A) A minor correction to an existing theory.
(B) A fundamental change in the basic concepts and practices of a scientific discipline.
(C) The routine process of collecting new data.
(D) A change in the lead researcher on a project.

113. "What are the coping mechanisms of communities living in chronically flood-prone areas?" This statement is best described as a:
(A) Hypothesis
(B) Research question
(C) Research design
(D) Statistical test

114. A study that aims to produce a detailed, in-depth description of the culture of a disaster response team would be an example of:
(A) An ethnography
(B) An experiment
(C) A correlational study
(D) A meta-analysis

115. The 'history of scientific thought' provides researchers with:
(A) A set of unchangeable laws about the universe.
(B) Ready-made answers to contemporary research problems.
(C) A context for understanding how knowledge and research methods have evolved.
(D) A justification for ignoring past research.

116. Which of the following is a primary method for ensuring the reliability of a research instrument?
(A) Increasing the sample size
(B) Using a complex statistical analysis
(C) Ensuring face validity
(D) Test-retest method

117. Which research approach would be most suitable to develop an in-depth understanding of the decision-making process of a single incident commander during a major fire?
(A) A large-scale quantitative survey
(B) A statistical trend analysis
(C) A case study
(D) A national census

118. What is the main characteristic of a 'probability sample'?
(A) It is the easiest and quickest type of sample to draw.
(B) The researcher can estimate the probability of each population element being included

Downloaded from www.pdf.tube

in the sample.
(C) The researcher uses their judgment to select the most "typical" members of the population.
(D) The sample size is always very small.

119. A key ethical dilemma in disaster research is the tension between:
(A) Qualitative and quantitative methods.
(B) Local and international researchers.
(C) The research budget and the project timeline.
(D) Gathering valid data and the imperative to protect vulnerable participants.

120. Consider the following research aspects of Health Emergency and Disaster Risk Management (Health-EDRM):
a. Surveillance of infectious diseases post-disaster.
b. Assessing the nutritional status of affected populations.
c. Evaluating the psychological impact on health workers.
d. Analyzing the seismic resistance of non-medical buildings.
Which of the above statement(s) is/are correct?
(A) a and d only
(B) b and c only
(C) a, b, and c only
(D) a, b, c, and d

121. The main difference between social research and participatory research is that participatory research emphasizes:
(A) The researcher's role as a detached, objective observer.
(B) The use of advanced statistical techniques exclusively.
(C) The collaboration with and empowerment of the people being studied.
(D) The study of non-human subjects.

122. In formulating a research problem, what does 'feasibility' refer to?
(A) Whether the researcher has the necessary skills, resources, and time to conduct the study.
(B) Whether the problem is interesting to the researcher.
(C) Whether the problem is new and has never been studied.
(D) Whether the problem is approved by a government agency.

123. Which of the following is an example of an 'incorrect pair'?
(A) Quantitative Research - Statistical Analysis
(B) Qualitative Research - In-depth Interviews
(C) Action Research - Solving an immediate problem
(D) Experimental Research - Narrative inquiry

124. The 'theoretical framework' of research provides the:
(A) Step-by-step instructions for data collection.
(B) Structure that guides the research, based on existing theory.
(C) List of participants in the study.
(D) Financial budget for the project.

125. The process of hypothesis testing is central to which research approach?
(A) Ethnography
(B) Narrative research
(C) Quantitative research
(D) Phenomenology

126. Which of the following correctly describes 'data processing'?
(A) The phase of asking respondents questions.
(B) The phase where conclusions are drawn.
(C) The phase of writing the final research report.
(D) The intermediate phase between data collection and data analysis, involving editing and coding.

NODIA

127. Consider the following sources for a literature review in disaster management research:
a. Peer-reviewed journal articles on risk perception.
b. Reports from the United Nations Office for Disaster Risk Reduction (UNDRR).
c. A fictional novel about a hypothetical disaster.
d. Doctoral dissertations on community resilience.
e. An unverified anecdote from a social media post.
Which of the above are considered legitimate academic sources?

(A) a, b, and d only
(B) c and e only
(C) a, c, and e only
(D) b, d, and e only

128. What is the fundamental principle of 'Community-Based Participatory Research' (CBPR) in the context of disaster studies?
(A) Research is conducted on the community for purely academic purposes.
(B) The community participates as equitable partners in all phases of the research.
(C) The community is only involved in the data collection phase.
(D) Researchers provide solutions to the community without consultation.

129. The main objective of constructing an 'interview guide' is to:
(A) Ensure the interview is completely standardized and rigid.
(B) Provide a flexible framework of topics to be covered during the conversation.
(C) Serve as a consent form for the participant.
(D) Record the answers given by the respondent verbatim.

130. A researcher who immerses herself in a post-disaster community for a year to understand their recovery process is using which qualitative approach?
(A) Ethnography
(B) Grounded theory
(C) Case study
(D) Phenomenology

131. The following paradigms of scientific thought. Arrange them chronologically based on their historical development.
I. Post-positivism
II. Positivism
III. Constructivism
IV. Pre-scientific thought (based on tradition/ authority)
(A) IV, II, I, III
(B) II, I, III, IV
(C) IV, III, II, I
(D) I, II, III, IV

132. What type of research error occurs if a study on disaster preparedness in a city only surveys wealthy neighborhoods, leading to skewed results?
(A) Type I error
(B) Type II error
(C) Random error
(D) Sampling bias

133. Which of the following is NOT a characteristic of a well-formulated research problem?
(A) It is expressed as a relation between two or more variables.
(B) It is stated clearly and unambiguously.
(C) It is a very broad and general statement covering all aspects of a field.
(D) It is amenable to empirical testing.

134. 'Disaster reconnaissance' is critical because:
(A) It provides a long-term solution to disaster risk.
(B) It captures ephemeral data that would otherwise be lost.
(C) It is the only ethical way to conduct disaster research.
(D) It focuses on theoretical model building rather than empirical data.

135. The concept of 'academic integrity' encompasses all of the following EXCEPT:
(A) Honesty in reporting data and results.
(B) Avoidance of plagiarism.
(C) Fair attribution of authorship.
(D) Ensuring research findings align with the views of the funding agency.

136. A study that analyzes tweets sent during a hurricane to understand information dissemination patterns is an example of:
(A) A computational method
(B) An ethnographic method
(C) A phenomenological method
(D) A grounded theory method

137. Which of the following is a primary goal of 'transdisciplinary research' in a disaster context?
(A) To prove the superiority of one academic discipline over others.
(B) To focus purely on theoretical advancements without practical application.
(C) Co-producing knowledge with diverse stakeholders to solve complex societal problems.

Click Here to Buy book on Amazon

(D) To conduct research within the strict confines of a single department.

138. Match the items in List I with the items in List II.

List I: (Research Approach)

P. Phenomenology
Q. Ethnography
R. Grounded Theory
S. Narrative Research

List II: (Core Question)

1. What is the culture of this group of people?
2. What is the story of this person's experience?
3. What theory emerges from the data about this phenomenon?
4. What is the essence of the lived experience of this phenomenon?

(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-1, R-3, S-2
(C) P-2, Q-3, R-4, S-1
(D) P-3, Q-4, R-1, S-2

139. A 'directional hypothesis' is so named because it:
(A) Directs the researcher on which statistical test to use.
(B) Is developed by the research director.
(C) Is written in the form of a question.
(D) Specifies the direction of the relationship between variables (e.g., more, less, higher, lower).

140. Which of the following statements about the role of 'laws' and 'theories' in research is correct?
(A) Theories are used to develop laws.
(B) Laws describe what happens, while theories explain why it happens.
(C) Laws and theories are identical concepts in research.
(D) Laws are only relevant in social sciences, and theories are only in natural sciences.

141. The primary purpose of a 'research design' is to provide a framework for:
(A) The financial accounting of the research project.
(B) The final dissemination of research findings.
(C) Collecting and analyzing data effectively to achieve objectives.
(D) The historical overview of the research topic.

NODIA

142. In 'participatory research', who are considered the experts?
(A) Only the university-based researchers.
(B) Only the external consultants hired for the project.
(C) The government officials overseeing the project.
(D) Both the researchers and the community members, who bring different but equally valid expertise.

143. Which of the following represents a significant 'ethical dilemma' specific to disaster research?
(A) Choosing between protecting a survivor's privacy and reporting a critical public health risk they disclosed.
(B) Deciding on the color scheme for a presentation slide.
(C) Debating whether to use a bar chart or a pie chart for data visualization.
(D) Filing an expense report for travel to the research site.

144. Consider the following statements about research methods:

a. Qualitative methods are best for understanding 'why' and 'how'.
b. Quantitative methods are ideal for measuring 'how much' or 'how many'.
c. Mixed-methods research aims to leverage the strengths of both qualitative and quantitative approaches.
d. The choice of method should be primarily driven by the research question.

Which of the above statement(s) is/are correct?
(A) a and b only
(B) c and d only
(C) a, b, and c only
(D) a, b, c, and d

145. A researcher wants to study the long-term psychological impact of an earthquake on a cohort of survivors by interviewing them every five years. This is an example of what type of study design?
(A) Cross-sectional study
(B) Longitudinal study
(C) Experimental study
(D) Case study

146. A "working hypothesis" is considered:

(A) A provisional or tentative proposition for testing.
(B) A conclusive proof.
(C) A final statement that cannot be changed.
(D) An irrelevant part of the research process.

147. A study exploring how people make sense of their everyday lives and social order is using the approach of:
(A) Phenomenology
(B) Grounded Theory
(C) Ethnomethodology
(D) Narrative Research

148. What is the key principle behind developing a research plan?
(A) To make the process as rigid as possible.
(B) To fulfill a formality for the funding agency with no practical use.
(C) To impress colleagues with complex diagrams.
(D) To provide a systematic and logical roadmap for conducting the study.

149. The first step in conducting 'action research' is typically:
(A) Developing a universal theory.
(B) Writing the final report.
(C) Identifying and diagnosing a problem in a specific context.
(D) Publishing the results.

150. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : In disaster research, obtaining truly 'informed consent' can be challenging.
Reason (R) : Survivors may be in a state of distress or feel coerced by the presence of aid workers, compromising their ability to give voluntary and fully understood consent.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

151. Which of the following is a key reason for conducting a 'critical literature review'?
(A) To demonstrate how much one has read.
(B) To copy sections for one's own research paper.
(C) To find spelling errors in published articles.
(D) To identify conceptual frameworks used in previous studies.

152. 'Generalization' refers to the ability to apply findings from:
(A) A sample to the wider population it represents.
(B) A single case to all other cases.
(C) A qualitative study to a quantitative study.
(D) A past study to a future event without testing.

153. A research design that involves collecting data at a single point in time from a sample is called a:
(A) Longitudinal design
(B) Experimental design
(C) Cross-sectional design
(D) Case study design

154. The concept of 'reliability' in research is concerned with:
(A) The consistency and dependability of the measurement.
(B) The ethical integrity of the researcher.
(C) The novelty of the research findings.
(D) The accuracy of the measurement in hitting the target.

155. Which of the following is a primary characteristic of 'applied research'?
(A) It is aimed at developing fundamental theories.
(B) It has no immediate application in the real world.
(C) It is conducted purely out of intellectual curiosity.
(D) It is designed to solve a specific practical problem.

NODIA

156. What is the fundamental ethical principle that obligates researchers to protect participants' personal information?
(A) Informed consent
(B) Confidentiality
(C) Beneficence
(D) Justice

157. In a research study, the variable that is measured to see the effect of the experimental manipulation is the:
(A) Independent variable
(B) Control variable
(C) Dependent variable
(D) Extraneous variable

158. Consider the following research methods:
a. Using GIS to map vulnerability.
b. Remote sensing to assess post-disaster damage.
c. Spatial analysis of disease outbreaks after a flood.
d. In-depth interviews about the meaning of "place".
e. Analysis of ancient maps for historical research.
Which of the above are categorized as 'Geographical methods for disaster research'?
(A) a, b, and c only
(B) b, d, and e only
(C) a, c, and d only
(D) a, b, c, d, and e

159. A significant challenge in conducting 'transdisciplinary research' is:
(A) The difficulty of integrating different disciplinary languages, methods, and epistemologies.
(B) Finding a problem that is complex enough.
(C) The lack of available data.
(D) The requirement to work alone.

160. Which of the following is NOT a form of research misconduct?
(A) Plagiarism
(B) Discovering results that contradict the initial hypothesis
(C) Fabrication of data
(D) Falsification of results

161. A 'case study' approach is most useful when the researcher wants to:
(A) Generalize findings to a large population.
(B) Gain a rich, in-depth understanding of a specific, bounded system.
(C) Test a hypothesis under controlled conditions.
(D) Collect numerical data from thousands of respondents.

162. A researcher states: "There is no relationship between the number of disaster awareness campaigns and the level of household preparedness." This is an example of a:
(A) Null hypothesis
(B) Directional hypothesis
(C) Non-directional hypothesis
(D) Research question

163. The primary feature of an 'experimental design' is:
(A) Participant observation
(B) In-depth interviewing
(C) Manipulation of an independent variable and control of extraneous variables
(D) Analysis of historical texts

164. In the context of ethics, 'privacy concerns' can be addressed by ensuring:
(A) The researcher makes a lot of money.
(B) The participant is famous.
(C) The research is published in a top journal.
(D) The data collected is kept confidential and/or anonymous.

165. The term 'Ethnomethodology' refers to a research approach focused on:
(A) The study of different ethnic groups.
(B) The historical development of research methods.
(C) The methods people use to make sense of and produce their social world.
(D) The statistical measurement of social phenomena.

166. In disaster research, 'qualitative approaches to risk assessment' are valuable for:
(A) Calculating the economic cost of a potential disaster.
(B) Understanding social factors that shape vulnerability and risk perception.
(C) Creating precise probabilistic models of hazard events.
(D) Determining the engineering standards for critical infrastructure.

167. Which of the following is an example of an 'incorrect pair' of research concept and its description?
(A) Validity - The extent to which a test measures what it claims to measure.

Downloaded from www.pdf.tube

(B) Reliability - The consistency of a measurement.
(C) Sample - A subset of a population selected for study.
(D) Hypothesis - A proven fact that requires no further testing.

168. The main purpose of research in Health Emergency and Disaster Risk Management (Health-EDRM) is to:
(A) Build an evidence base to improve healthcare system resilience.
(B) Develop new pharmaceuticals.
(C) Study the history of medicine.
(D) Focus exclusively on the financial aspects of healthcare.

169. 'Grounded theory' is an approach where theory is:
(A) Developed from a review of existing literature before data collection.
(B) Borrowed from a different discipline to explain the data.
(C) Developed inductively from the systematic analysis of collected data.
(D) Tested using an experimental design.

170. Which of the following is a key feature of 'social research'?
(A) It investigates the social world and human behavior.
(B) It must be conducted by a sociologist.
(C) It always uses quantitative methods.
(D) It is only applicable to Western societies.

171. The "history of scientific thought" helps a researcher understand:
(A) That scientific knowledge is fixed and absolute.
(B) How to operate laboratory equipment from the 19th century.
(C) The personal lives of scientists.
(D) The philosophical underpinnings and evolution of different research paradigms.

172. Which of the following sources of knowledge is most emphasized in scientific research?
(A) Tradition
(B) Empirical evidence
(C) Authority
(D) Intuition

173. Match the items in List I with the items in List II.
List I: (Sampling Technique)
P. Simple Random
Q. Systematic
R. Stratified
S. Convenience
List II: (Description)
1. Selecting participants who are easily accessible
2. Population divided into groups, then random sampling from each group
3. Selecting every nth element from a list
4. Each member of the population has an equal chance of being selected
(A) P-4, Q-3, R-2, S-1
(B) P-3, Q-4, R-1, S-2
(C) P-1, Q-2, R-3, S-4
(D) P-2, Q-1, R-4, S-3

NODIA

174. The process of identifying 'gap areas' from a literature review is crucial for:
(A) Proving that previous researchers were wrong.
(B) Filling the bibliography section of the thesis.
(C) Avoiding the need to collect primary data.
(D) Making the research original and ensuring it contributes new knowledge.

175. A hypothesis that predicts a specific relationship, such as "higher education leads to greater disaster preparedness," is:
(A) A directional hypothesis
(B) A null hypothesis
(C) A non-directional hypothesis
(D) A research question

176. Which of the following statements about disaster research ethics is INCORRECT?
(A) Researchers should be mindful of the "research fatigue" in heavily studied communities.
(B) It is acceptable to offer large cash payments that could be coercive in a desperate situation.
(C) The principle of "do no harm" is paramount.
(D) Researchers have a responsibility to share findings in an accessible way with the community.

177. A qualitative research approach that focuses on describing the culture of a specific group is:
(A) Phenomenology
(B) Ethnography
(C) Grounded Theory
(D) Case Study

178. What does "CBPR" stand for in the context of disaster research?
(A) Community-Based Participatory Research
(B) Community-Based Preparedness and Response
(C) Computer-Based Population Registry
(D) Citizen and Bureaucracy Policy Review

179. A researcher studying the impact of a new teaching method on student performance has two groups: one gets the new method, the other gets the standard method. The group getting the standard method is called the:
(A) Experimental group
(B) Sample group
(C) Control group
(D) Biased group

180. The primary aim of 'disaster reconnaissance' is:
(A) To provide immediate relief and aid.
(B) To arrest individuals responsible for the disaster.
(C) To establish a long-term research institute in the affected area.
(D) To conduct a rapid scientific assessment of disaster impacts and collect perishable data.

181. Consider the following research approaches:
a. Narrative research
b. Phenomenology
c. Statistical regression
d. Ethnography
e. Factor analysis
Which of the above are recognized qualitative research approaches?
(A) a, b, and d only
(B) c, d, and e only
(C) a, c, and e only
(D) b, c, and d only

182. 'Data processing' includes all of the following activities EXCEPT:
(A) Editing
(B) Formulating the hypothesis
(C) Coding
(D) Classification

183. The main difference between an 'interview schedule' and a 'questionnaire' lies in:
(A) The types of questions asked.
(B) The length of the instrument.
(C) The statistical analysis used.
(D) The method of administration.

184. In research, 'validity' refers to the _____, while 'reliability' refers to the _____.
(A) accuracy; consistency
(B) consistency; accuracy
(C) usability; ethics
(D) ethics; usability

185. Which of the following is a key feature of 'action research'?
(A) Detached observation
(B) A focus on historical events
(C) A cyclical process of planning, acting, observing, and reflecting
(D) The development of universal laws

186. Avoiding bias in research is essential for ensuring the study's:
(A) Objectivity and credibility
(B) Subjectivity and personal insight
(C) Complexity
(D) Length

187. Consider the following statements about research design:
a. It is a plan that specifies the objectives of the study.
b. It details the methodology and techniques to be adopted for data collection.
c. It should be rigid and not allow for any changes during research.
d. It specifies the plan for data analysis.
Which of the above are key features of a good research design?
(A) a, b, and d
(B) a, c, and d
(C) b and c only
(D) a and c only

188. In the context of disaster research, 'transdisciplinary research' is important because:

Click Here to Buy book on Amazon

(A) It simplifies complex problems into single-disciplinary issues.
(B) Integrating diverse forms of knowledge allows for holistic understanding.
(C) It is a requirement for all funding agencies.
(D) It ensures that only quantitative data is used.

189. Which of the following is a primary method used in 'computational methods for disaster research'?
(A) In-depth interviews
(B) Participant observation
(C) Agent-based modeling and simulation
(D) Narrative analysis

190. What is a 'Type I error'?
(A) Accepting a false null hypothesis.
(B) The difference between a sample statistic and the population parameter.
(C) An error in data entry.
(D) Rejecting a true null hypothesis.

191. The construction of a questionnaire should be guided primarily by:
(A) The research objectives and questions.
(B) The convenience of the researcher.
(C) The availability of a pre-existing template.
(D) The preferences of the respondents.

192. Which of the following correctly pairs a research paradigm with its core belief?
(A) Positivism - Reality is socially constructed.
(B) Post-positivism - Reality can only be known imperfectly and probabilistically.
(C) Constructivism - There is a single, objective reality that can be measured.
(D) Pragmatism - Research should focus only on historical analysis.

193. The primary ethical issue in research involving 'informed consent' is to ensure that participation is:
(A) Mandatory
(B) Voluntary and based on a clear understanding of the research
(C) Well-compensated
(D) Quick and efficient

194. A study that combines statistical analysis of household survey data with in-depth qualitative interviews with community leaders is an example of:
(A) A mixed-methods approach
(B) A purely quantitative approach
(C) A purely qualitative approach
(D) A theoretical study

195. Which type of research aims to describe the characteristics of a population or phenomenon?
(A) Experimental research
(B) Exploratory research
(C) Descriptive research
(D) Action research

196. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : Ethical guidelines are particularly complex in disaster research.
Reason (R) : Researchers must balance the scientific need for data with the immediate humanitarian needs and psychological state of a vulnerable and often traumatized population.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

197. The term 'autobiography' as a research method falls under which broader category?
(A) Experimental design
(B) Quantitative survey
(C) Narrative and life history research
(D) Statistical modeling

NODIA

198. Which of the following is the best way for a researcher to prevent plagiarism?
(A) By using a thesaurus to change every fifth word.
(B) By carefully tracking all sources and citing them properly whenever ideas or words are used.
(C) By not reading any existing literature on the topic.
(D) By writing the paper very quickly without checking sources.

199. A 'research approach' refers to:

(A) The specific tool used, like a questionnaire.
(B) The location where research is conducted.
(C) The title of the research paper.
(D) The broad plan spanning from assumptions to data collection and analysis.

200. What is a key distinction between 'social research' and 'applied research'?
(A) Social research aims to understand social phenomena, while applied research aims to solve a practical problem, though they can overlap.
(B) Social research is never applied, and applied research is never social.
(C) Social research uses only qualitative methods, and applied research uses only quantitative methods.
(D) Social research is unfunded, while applied research is always funded.

201. Consider the following research methods and areas of study:
a. Seismology
b. Hydrological modeling
c. Sociological surveys of affected populations
d. Epidemiological studies of post-disaster disease
Which of the above are relevant to the study of natural and environmental disasters?
(A) a and b only
(B) c and d only
(C) a, b, and c only
(D) a, b, c, d, and e

202. The main advantage of using a 'mixed-methods' approach in disaster research is:
(A) It provides a more complete and synergistic understanding of a complex phenomenon.
(B) It is the simplest and fastest research design.
(C) It eliminates the need for a literature review.
(D) It guarantees funding from all agencies.

203. The term 'paradigm' in research refers to:
(A) A specific method of data collection.
(B) A statistical formula.
(C) The final chapter of a thesis.
(D) A framework of philosophical assumptions that shapes the inquiry process.

204. The following are steps in the research process. Arrange them in the correct chronological order.
I. Hypothesis Testing
II. Research Design
III. Literature Review
IV. Data Collection
(A) III, II, IV, I
(B) II, III, IV, I
(C) III, IV, II, I
(D) I, II, III, IV

205. 'Ethical guidelines in research' are important for:
(A) Making research more difficult to conduct.
(B) Ensuring that research findings are always positive.
(C) Protecting the rights and welfare of research participants.
(D) Limiting the number of publications by a researcher.

206. 'Grounded theory' is a methodology that seeks to:
(A) Test pre-existing theories.
(B) Describe a particular culture.
(C) Understand the essence of a lived experience.
(D) Develop theory inductively from data.

207. Which of the following is a key component of a research plan?
(A) A detailed timeline and schedule of activities.
(B) The biographies of famous researchers.
(C) A list of potential journals for publication.
(D) A collection of personal opinions on the research topic.

208. Which is an example of an 'incorrect' statement about research?
(A) Research is a systematic process of inquiry.
(B) Research must always prove the initial hypothesis.
(C) Research should be conducted ethically.
(D) Research contributes to the existing body of knowledge.

209. In disaster research, what is a primary focus of 'qualitative approaches to risk reduction'?
(A) Building higher and stronger seawalls.
(B) Understanding perceptions and capacities to design appropriate interventions.
(C) Calculating the probability of a 100-year

Downloaded from www.pdf.tube

flood.
(D) Developing a new type of earthquake-resistant steel.

210. A 'non-directional hypothesis' would be stated as:
(A) "There is a difference between Method A and Method B."
(B) "Method A is better than Method B."
(C) "Method A is worse than Method B."
(D) "Is Method A different from Method B?"

211. What is the role of a theoretical framework in research?
(A) To provide the raw data for the study.
(B) To act as the foundation and structure upon which the research is built.
(C) To list the names of the research assistants.
(D) To present the final conclusions of the study.

212. In sampling, what is the 'sampling frame'?
(A) The total population of interest.
(B) The final group of participants who are studied.
(C) The physical boundary of the research area.
(D) The list of all elements in the population from which the sample is drawn.

213. The use of GPS, remote sensing, and GIS for mapping and analyzing spatial patterns of disaster impact are central to:
(A) Narrative research
(B) Phenomenological inquiry
(C) Geographical methods for disaster research
(D) Ethnomethodology

214. The final step in the research process is typically:
(A) Data collection
(B) Interpretation and reporting of findings
(C) Hypothesis formulation
(D) Sample selection

215. What is the most critical feature of 'Community-Based Participatory Research (CBPR)'?
(A) The research is conducted quickly.
(B) The community is only a subject.
(C) The research uses only quantitative methods.
(D) Treating the community as an equitable partner rather than a subject.

216. Which of the following is an example of a qualitative research question in a disaster context?
(A) How do survivors make sense of their loss and begin to rebuild their lives?
(B) What is the average economic loss per household due to the flood?
(C) How many people were displaced by the earthquake?
(D) What is the correlation between an early warning and evacuation rates?

NODIA

217. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : A research design is an essential component of a research project.
Reason (R) : A research design provides a structured plan that guides the collection and analysis of data to answer the research question.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

218. An 'interview guide' is most likely to be used in which type of interview?
(A) Semi-structured or unstructured interview
(B) Structured interview
(C) Telephone survey
(D) Mail questionnaire

219. The concept of "paradigm" in research refers to:
(A) A specific statistical test.
(B) The ethical guidelines of a study.
(C) The final research report.
(D) A model or framework of assumptions that guides inquiry.

220. Which two concepts are often referred to as the "twin pillars" of measurement quality in research?
(A) Subjectivity and Objectivity
(B) Validity and Reliability
(C) Qualitative and Quantitative
(D) Sample and Population

221. Match the items in List I with the items in List II based on a study of the effect of disaster awareness workshops on community preparedness.
List I: (Research Term)
P. Independent Variable
Q. Dependent Variable
R. Control Group
S. Type II Error
List II: (Example)
1. Level of community preparedness
2. Failing to find a real effect (false negative)
3. Number of disaster awareness workshops
4. A community that receives no workshops
(A) P-1, Q-3, R-2, S-4
(B) P-3, Q-1, R-4, S-2
(C) P-2, Q-4, R-1, S-3
(D) P-4, Q-2, R-3, S-1

222. Identifying a 'gap' in the literature means finding:
(A) A typing error in a published article.
(B) The appendix section of a book.
(C) A topic with too much controversy.
(D) An unanswered question or an area needing more research.

223. What is the primary purpose of 'disaster reconnaissance'?
(A) To capture and document ephemeral data immediately after a disaster.
(B) To provide long-term psychological counseling.
(C) To rebuild damaged infrastructure.
(D) To conduct a census of the affected population.

224. In research ethics, what is the difference between 'anonymity' and 'confidentiality'?
(A) They are the same thing.
(B) Confidentiality is for qualitative research; anonymity is for quantitative research.
(C) Confidentiality means the researcher knows the identity; anonymity means they do not.
(D) Anonymity means the researcher does not know the identity; confidentiality means they will not disclose it.

225. A 'case study' design is a form of:
(A) Quantitative, experimental research.
(B) Qualitative, in-depth inquiry.
(C) Statistical modeling.
(D) Large-scale survey research.

226. Which of the following correctly describes a 'quantitative approach to risk assessment'?
(A) It involves expressing risk in numerical terms, like probabilities and expected losses.
(B) It focuses on personal stories of risk.
(C) It uses ethnography to understand cultural views of risk.
(D) It relies on narrative analysis of historical accounts.

227. In the context of disaster research, what is 'ethnomethodology' concerned with?
(A) The statistical patterns of ethnic groups in disasters.
(B) Common-sense methods people use to make sense of their situation during a disaster.
(C) The large-scale cultural systems that influence disaster response.
(D) The life stories of individual survivors.

228. Which of the following is NOT a primary source of knowledge?
(A) A peer-reviewed research article detailing an original experiment.
(B) A historical document from the period being studied.
(C) A recording of an interview with an eyewitness.
(D) A textbook chapter summarizing the findings of multiple studies.

229. Consider the following research practices:
a. Researchers must obtain informed consent from participants.
b. Researchers must protect the privacy of participants.
c. Researchers must avoid fabricating or falsifying data.
d. Researchers can ignore potential harm if the research is important.
Which of the above are valid ethical guidelines for conducting research?
(A) a, b, and c
(B) a, c, and d
(C) b and d only
(D) a and d only

Click Here to Buy book on Amazon

230. A study that seeks to understand the 'lived experience' of being a first responder during a major incident is using which qualitative approach?
(A) Grounded theory
(B) Phenomenology
(C) Ethnography
(D) Case study

231. The main characteristic of 'applied research' is that it is:
(A) Focused on theoretical development.
(B) Conducted only in a laboratory.
(C) Less rigorous than pure research.
(D) Oriented towards solving a specific, practical problem.

232. What is the purpose of 'developing a research plan'?
(A) To provide a systematic and coherent guide for executing the research project.
(B) To create a document that will not be used.
(C) To make the research process more confusing.
(D) To choose the title of the final report.

233. In hypothesis testing, what is a 'Type II error'?
(A) Rejecting a null hypothesis that is actually true.
(B) Using the wrong statistical test.
(C) Failing to reject a null hypothesis that is actually false.
(D) Having a sample size that is too large.

234. A key ethical challenge in 'disaster research' is:
(A) Ensuring that the research does not interfere with life-saving relief efforts.
(B) Deciding which font to use in the final report.
(C) Getting enough media coverage for the research.
(D) Finding a research topic that is easy.

235. The 'validity' of a research finding refers to:
(A) Its consistency over time.
(B) Its truthfulness and accuracy.
(C) Its ease of publication.
(D) Its truthfulness and accuracy.

236. Consider the following actions in an academic context:
a. Submitting someone else's paper as your own.
b. Copying sentences from a book without citation.
c. Paraphrasing an idea from an article without giving credit to the original author.
d. Properly quoting a source with a full citation.
e. Citing a source you did not actually read.
Which of the above actions constitutes plagiarism or research misconduct?
(A) a, b, and c only
(B) a, b, c, and e
(C) d and e only
(D) a and b only

237. The 'significance' of a research problem refers to its:
(A) Difficulty level.
(B) Personal interest to the researcher.
(C) Potential to contribute to knowledge or practice.
(D) Cost of investigation.

238. The following question consists of two statements, one labeled as Assertion (A) and the other as Reason (R). Select the correct answer using the codes given below.
Assertion (A) : A literature review is a foundational step in the research process.
Reason (R) : It helps the researcher to understand the existing knowledge, identify gaps, and position their own study within the field.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

239. 'Narrative research' is a method that primarily analyzes:
(A) Stories and personal accounts.
(B) Numbers and statistics.
(C) Cultural artifacts.
(D) Geographic distributions.

240. The principle of 'generalization' is most associated with which type of research?
(A) Qualitative research

Downloaded from www.pdf.tube

(B) Quantitative research
(C) Case study research
(D) Action research

241. What is the defining feature of 'participatory research'?
(A) The researcher works in isolation.
(B) The community members are active partners in the research process.
(C) The research is funded by a large corporation.
(D) The research only uses historical documents.

242. In 'Health Emergency and Disaster Risk Management (Health-EDRM)', research might investigate:
(A) The mental health impacts on survivors and responders.
(B) The structural engineering of bridges.
(C) The history of ancient civilizations.
(D) The marketing strategies for new consumer products.

243. The process of assigning numerals or symbols to answers so that they can be categorized and analyzed is called:
(A) Editing
(B) Tabulation
(C) Coding
(D) Generalization

244. A key ethical principle is that participation in a research study should be voluntary, which is ensured through the process of:
(A) Random sampling
(B) Data analysis
(C) Peer review
(D) Informed consent

245. Which of the following is NOT commonly recognized as a standard category of academic research?
(A) Action research
(B) Participatory research
(C) Hypothetical research
(D) Applied research

246. 'Computational methods for disaster research' may include:
(A) Analyzing the themes in survivor interviews.
(B) Using machine learning to analyze social media data for situational awareness.
(C) Immersing oneself in the culture of a relief camp.
(D) Recounting a personal story of a disaster.

247. What is the relationship between a research problem and a hypothesis?
(A) They are the same thing.
(B) A hypothesis is only used if there is no research problem.
(C) A research problem is a tentative answer to the hypothesis.
(D) A hypothesis is a tentative answer to the research problem.

NODIA

248. The study of how a community recovers its social structure and routines after a devastating hurricane would be a prime topic for:
(A) A social research study.
(B) A laboratory experiment.
(C) A study in theoretical physics.
(D) A purely historical inquiry.

249. Which of the following is an example of an 'identifying incorrect pair' question type itself reflecting a potential pitfall in research?
(A) Ensuring correct categorization.
(B) Seeking clarity in definitions.
(C) Assuming relationships that do not exist.
(D) The need for precise matching.

250. The ultimate goal of research in disaster management is to:
(A) Produce evidence that contributes to reducing disaster risk and improving outcomes for affected people.
(B) Generate publications for academics.
(C) Test complex statistical models.
(D) Document the history of disasters for future generations.

Direction : Please read the following source carefully.

Research, in its broadest sense, is a systematic and organised inquiry aimed at discovering, interpreting, and revising facts. This process transcends mere information gathering, as it is grounded in a specific theoretical framework that guides the investigation. The journey of knowledge acquisition has evolved significantly throughout the history of scientific thought, moving from traditional sources like authority and intuition

towards more empirical and logical methods. This evolution is marked by shifts in research paradigms, which are fundamental models or frames of reference that we use to organise our observations and reasoning. A paradigm dictates the types of questions that are considered legitimate and the methods used to answer them. Within this structure, research can be categorised based on its purpose. For instance, social research investigates human behaviour and societies, while applied research aims to solve specific, practical problems. Action research is a reflective process of progressive problem-solving led by individuals working with others in teams to improve the way they address issues. A more collaborative approach is participatory research, which emphasizes the involvement of the community or stakeholders in the entire research process, ensuring relevance and empowerment. Each type operates within a defined theoretical context, underscoring that all credible research is built upon a foundation of established concepts and principles.

Based on the above source, attempt the following five questions.

251. According to the paragraph, what fundamentally distinguishes research from mere information gathering?
(A) The use of multiple sources of knowledge.
(B) Its grounding in a specific theoretical framework.
(C) The involvement of a community or stakeholders.
(D) Its focus on solving immediate, practical problems.

252. The paragraph describes a research paradigm as a:
(A) fundamental frame of reference for organising observations.
(B) specific type of social research.
(C) method for conducting participatory research.
(D) technique for solving practical, applied problems.

253. Based on the descriptions provided, which type of research is most explicitly defined by its collaborative nature and stakeholder involvement?
(A) Applied research
(B) Social research
(C) Participatory research
(D) Action research

254. It can be inferred from the text that the history of scientific thought is characterised by a shift towards:
(A) greater reliance on traditional sources of authority.
(B) a focus solely on theoretical, non-practical questions.
(C) a reduction in the number of research paradigms.
(D) methods that are more empirical and logical.

255. The text suggests that action research is primarily a:
(A) solitary process of independent investigation.
(B) one-time study to solve a single problem.
(C) reflective and progressive problem-solving process involving teams.
(D) theoretical inquiry with no immediate practical application.

Direction : Please read the following source carefully.

The inception of any rigorous research project lies in the careful formulation of a research problem. This initial step is not arbitrary but is often informed by a comprehensive literature review, which serves as the bedrock for the study. The sources for a literature review are diverse, ranging from academic journals and books to official reports and scholarly databases. The importance of this review cannot be overstated; it helps the researcher to understand the existing body of knowledge, identify key concepts and theories, and most critically, to pinpoint gap areas. A critical literature review goes beyond mere summarization; it involves a systematic evaluation and synthesis of the literature to justify the need for new research. Once a gap is clearly identified, the researcher can formulate a hypothesis. A hypothesis is a tentative statement about the relationship between two or more variables. It can be developed in different forms, such as a directional hypothesis, which specifies the expected direction of the relationship, or a non-directional hypothesis, which posits a relationship without predicting its direction. A well-developed

Click Here to Buy book on Amazon

working hypothesis provides a clear focus for the study and guides the data collection and analysis phases. The significance of the hypothesis lies in its testability, allowing the researcher to empirically validate or refute the proposed relationship, thereby contributing to the existing knowledge base. The validity and reliability of the research instruments are also crucial considerations that stem from this initial planning phase.

Based on the above source, attempt the following five questions.

256. What is presented in the paragraph as the most critical outcome of a literature review?
(A) Summarizing all available academic journals.
(B) Pinpointing gap areas for new research.
(C) Identifying key authors in a specific field.
(D) Compiling a list of diverse literature sources.

257. According to the text, a "directional hypothesis" is one that:
(A) proposes a relationship exists but does not state its nature.
(B) is developed without a prior literature review.
(C) can only be used in non-scientific research.
(D) specifies the expected direction of a relationship between variables.

258. The paragraph suggests a sequential process for beginning research. Which of the following best represents this sequence?
(A) Research Problem → Literature Review → Hypothesis
(B) Hypothesis → Literature Review → Research Problem
(C) Literature Review → Research Problem → Hypothesis
(D) Hypothesis → Research Problem → Literature Review

259. What is the primary function of a well-developed working hypothesis as described in the text?
(A) To provide a definitive answer to the research problem.
(B) To serve as a final summary of the literature review.
(C) To provide focus and guidance for the research process.
(D) To ensure the validity and reliability of the study.

260. A critical literature review is distinguished from a simple summary because it involves:
(A) evaluating and synthesizing the literature.
(B) only reviewing sources from academic journals.
(C) ignoring existing theories to create a new one.
(D) focusing solely on the most recent publications.

Direction : Please read the following source carefully.

The architecture of any scientific study is its research design, a comprehensive plan that connects the conceptual research problems to the pertinent empirical research. The basic principles of a good research design are centered on ensuring the results are objective, valid, and reliable. The need for a research design is paramount as it provides a structured framework, preventing the research from becoming a haphazard and unfocused collection of data. Among the features of a good design are clarity, flexibility, efficiency, and the ability to minimize bias and maximize the reliability of the evidence collected. Several important concepts are related to research design, including the clear definition of variables, the establishment of control mechanisms to rule out extraneous influences, and the articulation of the study's scope and limitations. Laws and theories play a crucial role, as the design is often constructed to test theoretical propositions. The overall research approach, whether quantitative, qualitative, or mixed-methods, will heavily influence the design. Developing a research plan is a systematic process that involves determining the most appropriate experimental and sample designs. An experimental design, for example, would involve manipulating variables to observe effects, whereas various sample designs dictate how subjects or units will be selected from a population. This meticulous planning ensures that the evidence obtained enables the researcher to answer the initial research questions as unambiguously as possible.

Based on the above source, attempt the following five questions.

NODIA

261. What is described as the primary need for a research design in a study?
(A) To guarantee the publication of the research findings.
(B) To select the most prestigious theories to test.
(C) To ensure the research approach is purely quantitative.
(D) To provide a structured framework and prevent haphazard data collection.

262. According to the paragraph, which of the following is NOT listed as a feature of a good research design?
(A) Flexibility
(B) Rigidity
(C) Efficiency
(D) Clarity

263. The text suggests that the research approach (e.g., quantitative, qualitative) has a significant influence on:
(A) the researcher's personal biases.
(B) the laws and theories being tested.
(C) the development of the research design.
(D) the final interpretation of the data.

264. It can be inferred from the paragraph that a key difference between experimental and sample designs is that:
(A) experimental designs involve selecting units, while sample designs involve manipulating variables.
(B) experimental designs are only used in qualitative research, and sample designs only in quantitative.
(C) experimental designs are less systematic than sample designs.
(D) experimental designs focus on manipulating variables, while sample designs focus on selecting units.

265. The main purpose of a research design, as articulated in the source, is to:
(A) connect conceptual problems to empirical research.
(B) develop new laws and theories from scratch.
(C) prioritize data collection over data analysis.
(D) eliminate the need for a literature review.

Direction : Please read the following source carefully.

The process of data collection is a critical phase in research where the abstract concepts of a study are operationalized and measured. The choice of methods, sources, or tools for data collection is dictated by the research question, the research design, and the nature of the variables being investigated. A researcher may choose from a variety of tools, each with its own strengths and weaknesses. The construction of these tools requires careful consideration to ensure they are valid and reliable. For instance, a questionnaire, which consists of a set of questions for respondents to answer, must be designed with clear, unambiguous language and a logical flow. The questions can be open-ended or closed-ended, depending on whether the researcher seeks qualitative depth or quantitative data. Similarly, an interview schedule provides a more structured format for face-to-face or telephonic interviews, listing the exact questions to be asked in a specific order. This contrasts with an interview guide, which is typically used in semi-structured or unstructured interviews. An interview guide lists topics or open-ended questions to be covered, allowing for more flexibility and probing during the conversation. The selection and meticulous construction of these instruments are fundamental to gathering high-quality data that can be meaningfully analyzed to address the research problem.

Based on the above source, attempt the following five questions.

266. According to the text, what is the primary determinant for choosing a specific data collection method?
(A) The researcher's personal preference for a tool.
(B) The research question and design of the study.
(C) The availability of funding for the research.
(D) The ease of constructing the data collection tool.

267. What key difference between an interview schedule and an interview guide is highlighted in the paragraph?
(A) An interview schedule is for questionnaires, while a guide is for interviews.
(B) An interview schedule is more structured and rigid than an interview guide.

Downloaded from www.pdf.tube

(C) An interview guide is used for quantitative data, while a schedule is for qualitative data.
(D) An interview guide can only be used for telephonic interviews.

268. The paragraph suggests that the construction of a good questionnaire requires:
(A) ensuring the language is clear and the flow is logical.
(B) including as many questions as possible.
(C) using only open-ended questions for detailed responses.
(D) designing it to be used only by trained interviewers.

269. It can be inferred that a researcher seeking quantitative data would most likely use:
(A) an interview guide with broad topics.
(B) unstructured interviews with maximum flexibility.
(C) a questionnaire with closed-ended questions.
(D) an interview guide for in-depth probing.

270. The overarching goal of meticulously constructing data collection instruments is to:
(A) make the research process faster and less expensive.
(B) test the respondent's knowledge of the research topic.
(C) eliminate the need for data processing.
(D) gather high-quality data for meaningful analysis.

Direction : Please read the following source carefully.

Once data has been collected, the research process moves into the phases of sampling, data processing, and analysis. Sampling involves the selection of a subset of individuals from within a statistical population to estimate characteristics of the whole population. Various sampling concepts, types, and techniques exist, each suited to different research objectives and constraints, such as probability sampling (e.g., simple random, stratified) and non-probability sampling (e.g., convenience, purposive). After collection, the raw data must undergo processing, which includes editing, coding, and entering the data into a computing system to make it ready for analysis. Data analysis is the process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information and supporting decision-making. This often involves the use of statistics to summarize the data and make inferences. A crucial part of analysis is hypothesis testing, where statistical methods are employed to determine whether a specific hypothesis is supported by the data. In this process, researchers must be aware of the possibility of making errors, such as a Type I error (rejecting a true null hypothesis) or a Type II error (failing to reject a false null hypothesis). Finally, the results of the analysis are interpreted, and generalizations are made. This interpretation is not merely a statement of statistical findings but a broader discussion of the implications of the results in the context of the research problem and existing theory.

Based on the above source, attempt the following five questions.

271. According to the paragraph, what is the primary purpose of sampling in research?
(A) To study every individual in the entire population.
(B) To eliminate the need for data processing and analysis.
(C) To estimate the characteristics of a population by studying a subset.
(D) To ensure that only non-probability techniques are used.

272. The text defines a "Type I error" in hypothesis testing as:
(A) failing to reject a false null hypothesis.
(B) rejecting a true null hypothesis.
(C) making a mistake during data processing.
(D) selecting an inappropriate sampling technique.

273. Which of the following sequences best represents the process described in the paragraph?
(A) Data Analysis → Data Processing → Sampling
(B) Data Processing → Sampling → Hypothesis Testing
(C) Hypothesis Testing → Interpretation → Sampling
(D) Sampling → Data Processing → Data Analysis

NODIA

274. Data processing, as explained in the text, involves which of the following activities?
(A) Editing, coding, and entering data for analysis.
(B) Generalization and interpretation of final results.
(C) Selecting a subset of individuals from a population.
(D) Formulating the initial research hypothesis.

275. The final stage of generalization and interpretation involves:
(A) only restating the statistical findings.
(B) correcting Type I and Type II errors after they occur.
(C) discussing the implications of the results in a broader context.
(D) re-collecting the data if the hypothesis is not supported.

Direction : Please read the following source carefully.

The conduct of research is governed by a strict set of ethical considerations designed to protect participants and uphold the integrity of the scientific process. Ethical issues in research are multifaceted, extending from the initial design to the final dissemination of findings. A primary concern is identifying and avoiding bias, which can compromise the objectivity of the study. Researchers must be vigilant against personal, cultural, or methodological biases that could skew data collection, analysis, or interpretation. Another cornerstone of ethical research is academic integrity and the prevention of plagiarism. This entails giving proper credit to the work and ideas of others and presenting one's own findings honestly. To guide researchers, institutions and professional bodies establish clear guidelines. Central to these guidelines is the principle of informed consent, which mandates that participants must be fully informed about the research purpose, procedures, potential risks, and benefits before they voluntarily agree to participate. Closely related to this are privacy concerns; researchers have an obligation to protect the confidentiality and anonymity of their participants, ensuring that personal information is not disclosed without permission. Adherence to these ethical principles is not merely a procedural formality but a fundamental responsibility that ensures trust in the research enterprise and respects the dignity and rights of all individuals involved.

Based on the above source, attempt the following five questions.

276. The principle of "informed consent" requires that participants are:
(A) fully aware of the research details before voluntarily agreeing to join.
(B) paid for their time and contribution to the study.
(C) selected randomly from the general population.
(D) guaranteed that the research will be published.

277. According to the paragraph, academic integrity and the prevention of plagiarism primarily involve:
(A) avoiding personal biases in data interpretation.
(B) protecting the privacy and anonymity of participants.
(C) ensuring that research findings have practical applications.
(D) giving proper credit for the work and ideas of others.

278. Which of the following is presented as a fundamental responsibility of a researcher regarding participants' data?
(A) Disclosing personal information to the funding agency.
(B) Protecting the confidentiality and anonymity of individuals.
(C) Using real names to add authenticity to the report.
(D) Sharing raw data publicly without any restrictions.

279. The text suggests that identifying and avoiding bias is crucial for:
(A) ensuring participants give informed consent.
(B) speeding up the data collection process.
(C) maintaining the objectivity of the research study.
(D) preventing plagiarism in the final report.

Click Here to Buy book on Amazon

280. What is the overarching purpose of adhering to ethical considerations in research, as implied by the paragraph?
(A) To ensure the research receives adequate funding.
(B) To make the research process more complex and rigorous.
(C) To guarantee that all hypotheses are proven correct.
(D) To protect participants and maintain trust in the scientific process.

Direction : Please read the following source carefully.

Disaster research is a specialized field that requires a unique methodological perspective due to the chaotic and sensitive nature of its subject matter. The definitions and concepts in disaster research often focus on vulnerability, risk, resilience, and response in the context of extreme events. A hallmark of this field is the increasing adoption of transdisciplinary research, an approach that integrates knowledge and methods from different academic disciplines and non-academic stakeholders to address complex societal problems like disasters. This goes beyond multidisciplinary collaboration by seeking to create a holistic and systemic understanding. The methods in contemporary disaster research have evolved to capture the multifaceted impacts of disasters. Research methods in disaster and humanitarian settings must be adaptable and ethically sound, often requiring a combination of qualitative, quantitative, and mixed-methods approaches. For instance, quantitative data might be used to map the extent of physical damage, while qualitative methods can explore the lived experiences and coping mechanisms of affected populations. The choice of method is critical and must be appropriate for the specific phase of the disaster cycle—be it mitigation, preparedness, response, or recovery. This adaptability and integration of diverse perspectives are essential for generating knowledge that is both academically rigorous and practically relevant for reducing disaster risk and improving humanitarian outcomes.

Based on the above source, attempt the following five questions.

281. What distinguishes transdisciplinary research in the context of disasters, according to the text?
(A) It integrates knowledge from academic and non-academic stakeholders for a holistic view.
(B) It relies solely on quantitative methods for analysis.
(C) It strictly separates academic disciplines to maintain purity.
(D) It is only applicable during the recovery phase of a disaster.

282. The paragraph suggests that research methods in disaster settings must be primarily:
(A) rigid and unchangeable.
(B) adaptable and ethically sound.
(C) focused only on physical damage.
(D) conducted by a single researcher.

283. According to the source, what is an example of how a qualitative method might be used in disaster research?
(A) To map the geographic extent of flooding.
(B) To explore the lived experiences of survivors.
(C) To calculate the economic cost of an earthquake.
(D) To count the number of damaged buildings.

NODIA

284. It can be inferred that the choice of research method in a disaster context is critically dependent on:
(A) the specific phase of the disaster cycle.
(B) the preference of the funding agency.
(C) the availability of advanced statistical software.
(D) the number of disciplines involved in the study.

285. The primary goal of integrating diverse perspectives in contemporary disaster research is to:
(A) make the research more complicated and theoretical.
(B) focus exclusively on the response phase of disasters.
(C) generate knowledge that is both rigorous and practically relevant.
(D) replace traditional research methods entirely.

Direction : Please read the following source carefully.

In disaster research, the selection of a research

approach is pivotal for understanding the complex interplay of factors contributing to risk and resilience. Both qualitative and quantitative approaches are employed, often in a mixed-methods design, to achieve a comprehensive understanding. The quantitative approach to risk assessment typically involves statistical analysis, modeling, and numerical data to measure hazard exposure, physical vulnerability, and potential losses. It seeks to quantify risk in terms of probabilities and magnitudes, which is essential for policy-making, insurance, and engineering solutions. In contrast, the qualitative approach to risk assessment and reduction delves into the social dimensions of risk. It explores perceptions, social vulnerability, cultural factors, and the underlying causes of risk through methods that generate non-numerical data. Approaches to qualitative research are diverse; for example, narrative research can capture personal stories of disaster survival, while ethnography can provide a deep understanding of a community's daily life and its relation to environmental hazards. A case study might offer an in-depth analysis of a specific disaster event or community response. By using these qualitative methods, researchers can uncover nuanced insights into why some communities are more vulnerable than others and how local capacities can be strengthened for risk reduction. The integration of both quantitative and qualitative approaches provides a more holistic and effective basis for disaster risk management.

Based on the above source, attempt the following five questions.

286. What is the primary focus of a quantitative approach to risk assessment as described in the paragraph?
(A) Exploring personal stories and cultural factors.
(B) Understanding the social dimensions of vulnerability.
(C) Analyzing the underlying causes of risk through non-numerical data.
(D) Measuring risk using probabilities, magnitudes, and numerical data.

287. A qualitative approach to risk reduction is valuable because it can:
(A) provide precise engineering solutions for infrastructure.
(B) calculate the exact economic loss from a disaster.
(C) uncover nuanced insights into social vulnerability and perceptions.
(D) generate large-scale statistical models of hazard exposure.

288. According to the text, which qualitative research approach would be most suitable for gaining a deep understanding of a community's daily life and its relationship with local hazards?
(A) Narrative research
(B) Ethnography
(C) Case study
(D) Statistical modeling

289. The paragraph suggests that a mixed-methods design in disaster research is beneficial because it:
(A) is simpler and quicker to execute than a single approach.
(B) exclusively uses numerical data for all assessments.
(C) focuses only on the social dimensions of risk.
(D) achieves a more comprehensive and holistic understanding.

290. It can be inferred from the text that a case study in disaster research would likely involve:
(A) an in-depth analysis of a specific event or community.
(B) a global statistical analysis of all recent disasters.
(C) a collection of short, unrelated personal stories.
(D) the development of a new probability theorem.

NODIA

Direction : Please read the following source carefully.

Qualitative research offers a rich tapestry of methods to explore the human dimensions of disasters, providing depth and context that quantitative measures alone cannot capture. Several distinct approaches exist, each with a unique focus. Narrative research, for instance, centers on the stories people tell to make sense of their experiences, collecting and analyzing chronicles of individuals or small groups to

understand personal histories within a disaster context. Phenomenology seeks to understand the essence of a lived experience, focusing on what individuals have in common as they experience a phenomenon like evacuation or loss. Grounded theory is an inductive approach where the researcher aims to develop a theory "grounded" in the data collected from the field, rather than starting with a preconceived hypothesis. This is particularly useful in new or poorly understood disaster scenarios. Ethnography involves the researcher's immersion in a community or cultural group to understand their behaviors, values, and social structures from an insider's perspective, which can reveal hidden patterns of vulnerability and resilience. Autobiography, as a research method, provides a deeply personal account of an experience, while a case study offers a detailed investigation of a single unit, such as a person, event, or organization, in its real-life context. Finally, ethnomethodology examines how people use everyday conversation and interactions to construct a sense of social order, which can be highly relevant in the chaotic aftermath of a disaster.

Based on the above source, attempt the following five questions.

291. Which qualitative approach is described as an inductive process aimed at developing a theory directly from the collected data?
(A) Phenomenology
(B) Narrative research
(C) Grounded theory
(D) Ethnography

292. A researcher wanting to understand the common essence of the experience of living in a temporary shelter after a flood would most appropriately use which approach?
(A) Phenomenology
(B) Ethnography
(C) Ethnomethodology
(D) Autobiography

293. According to the paragraph, the primary method of ethnography involves:
(A) collecting and analyzing personal stories and chronicles.
(B) developing a theory from a preconceived hypothesis.
(C) a detailed investigation of a single, isolated event.
(D) the researcher's immersion in a community to understand it from an insider's view.

294. The key difference between narrative research and autobiography, as can be inferred from the text, is that:
(A) narrative research focuses on a community, while autobiography focuses on an individual.
(B) narrative research analyzes stories of others, while autobiography is a first-person account by the researcher/subject.
(C) narrative research is quantitative, whereas autobiography is qualitative.
(D) narrative research develops a theory, while autobiography tests a hypothesis.

295. Ethnomethodology would be a relevant research approach in a disaster's aftermath to study:
(A) the statistical correlation between aid distribution and recovery rates.
(B) the geological causes of the disaster event.
(C) how survivors create a sense of order through everyday interactions.
(D) a single individual's life story before the disaster.

Direction : Please read the following source carefully.

The landscape of disaster research is increasingly populated by specialized methodologies tailored to specific challenges. Research methods for Health Emergency and Disaster Risk Management (Health-EDRM) focus on public health systems, epidemiological surveillance, mental health impacts, and the effectiveness of health interventions during and after crises. In parallel, computational methods for disaster research leverage big data, artificial intelligence, and simulation modeling to predict disaster impacts, optimize evacuation routes, and analyze social media data for situational awareness. Geographical methods, including Geographic Information Systems (GIS) and remote sensing, are indispensable for spatial analysis, mapping hazard zones, assessing damage, and planning land use for risk reduction. A particularly acute form of field research is disaster reconnaissance, which involves rapid, on-the-ground data

Downloaded from www.pdf.tube

collection in the immediate aftermath of an event to capture perishable data about physical damage and social responses. This type of research, along with community-based participatory research (CBPR), where community members are equitable partners in the research process, faces significant ethical dilemmas. Issues of intrusion, potential for re-traumatization, and ensuring that research provides tangible benefits to the affected community are paramount. The ethics and ethical dilemmas in disasters are therefore not an afterthought but a central, guiding component of the research design, especially when dealing with vulnerable populations in crisis.

Based on the above source, attempt the following five questions.

296. According to the paragraph, what is the primary purpose of computational methods in disaster research?
(A) To conduct face-to-face interviews with survivors.
(B) To analyze public health system effectiveness.
(C) To map hazard zones using satellite imagery exclusively.
(D) To leverage big data and AI for prediction and situational awareness.

297. Disaster reconnaissance is characterized by:
(A) rapid, on-the-ground data collection immediately after an event.
(B) long-term, multi-year data collection.
(C) research conducted entirely from a remote office.
(D) a focus on historical disaster events only.

298. The text highlights that research methods for Health-EDRM would likely focus on which of the following?
(A) Optimizing evacuation routes using simulation models.
(B) Epidemiological surveillance and mental health impacts.
(C) Land use planning for long-term risk reduction.
(D) Analyzing social media data for rumors.

299. What is a defining feature of community-based participatory research (CBPR) mentioned in the source?
(A) The research is conducted solely by outside experts.
(B) Community members are equitable partners in the research process.
(C) Community members are treated as subjects rather than partners.
(D) The research focuses only on physical infrastructure damage.

300. The paragraph emphasizes that a major ethical dilemma in disaster research is the:
(A) potential for intrusion and re-traumatization of survivors.
(B) difficulty in publishing research findings quickly.
(C) cost of using advanced geographical methods.
(D) competition between different research teams.

NODIA
www.nodia.in

ANSWERS

1. (B) A systematic investigation to establish objective facts and reach new conclusions.
Academic research is a rigorous and structured process used to investigate specific phenomena. It relies on the systematic collection and analysis of data to validate or challenge existing knowledge. This approach ensures that findings are based on objective facts rather than personal beliefs or unverified information. By following standardized methodologies, researchers can reach new, reliable conclusions that contribute to the broader body of academic knowledge and theory.

2. (A) Direct observation and experimentation
Empiricism serves as the foundation of modern scientific inquiry, emphasizing the importance of sensory experience. In this framework, knowledge is primarily derived from direct observation and controlled experimentation rather than abstract reasoning or traditional authority. This method allows researchers to gather measurable evidence that can be tested and replicated. Such evidence-based investigations are essential for establishing objective facts and understanding the physical and social world.

3. (A) P-4, Q-3, R-1, S-2
Applied research focuses on finding practical solutions for specific questions to inform policy. Action research addresses immediate problems through a cyclical process of reflection and action within a specific group. Social research aims to understand the complex patterns and structures within human society. Participatory research empowers community members by involving them as active partners to solve their own challenges. These distinct approaches cater to different research goals and professional contexts.

4. (D) It is primarily conducted to copy paragraphs from existing studies.
A literature review is a critical component of the research process, designed to survey existing scholarly works. It helps investigators identify established theories, key concepts, and significant gaps in current knowledge. This foundation is necessary for building a robust theoretical framework and justifying the need for a new study. Copying text directly from existing studies without proper attribution is a violation of academic integrity and professional ethics.

5. (C) Directional hypothesis
A directional hypothesis predicts a specific nature or direction of the relationship between two or more variables. In this instance, the statement clearly indicates that an increase in community participation will result in higher levels of preparedness. This type of hypothesis provides a clear expectation of the outcome, distinguishing it from non-directional hypotheses that only state a relationship exists without specifying the expected direction of change.

6. (B) Both A and R are true but R is not the correct explanation of A.
Reliability refers to the consistency and stability of a research instrument, ensuring that it produces similar results over repeated applications. While reliability is a prerequisite for validity, a tool being reliable does not automatically make it valid. Validity specifically concerns whether the tool accurately measures what it is intended to measure. Therefore, while both concepts are crucial for high-quality research, they represent different measurement qualities.

7. (D) To provide the conceptual structure of theories upon which the research rests.
A theoretical framework acts as the conceptual foundation for a research study, situating it within existing scholarly debates. It identifies and describes the specific theories and concepts that the investigator uses to guide the inquiry and interpret the findings. This structure helps explain why the research problem exists and provides a logical basis for the hypotheses. It serves as a roadmap for the entire investigation.

8. (A) The degree to which a study accurately measures what it intends to measure.

Click Here to Buy book on Amazon

Validity represents the extent to which a research study or instrument accurately captures the specific concept it intends to measure. It ensures that the findings are authentic and truly represent the phenomena under investigation. High validity is essential for the credibility and meaningfulness of research results. Without it, even the most consistent or reliable measurements may fail to provide useful or accurate information about reality.

9. (A) a, c, and d only
Formulating a research problem requires clarity, specificity, and a focus on feasibility. The problem should be clearly defined to guide the investigation effectively while considering the availability of time and resources. Additionally, the researcher's interest in the topic plays a vital role in maintaining motivation throughout the process. Originality is valuable, but research does not need to be entirely new; it often builds upon studies.

10. (A) Rationalism
Rationalism is a philosophical approach that identifies reason and logical deduction as the primary sources of knowledge. It relies on established premises and internal logic to arrive at conclusions, independent of sensory experience. This deductive process is often used in mathematics and theoretical logic. It contrasts with empiricism, which emphasizes observation. In academic contexts, rationalism provides the logical structure necessary for developing theories and hypotheses effectively.

11. (D) Solving local problems through a cyclical process of planning and reflecting.
Action research is characterized by its focus on solving immediate, local problems within a specific context. It typically involves a cyclical process of planning an intervention, acting upon it, observing the results, and reflecting on the outcomes. This methodology is often used by practitioners to improve their own practices or address community-specific issues. It prioritizes practical application and iterative improvement over the development of universal theories.

12. (A) I, II, V, III, IV
Formulating a research problem involves a logical progression from a broad area of interest to specific objectives. The process begins by identifying a general field, then dissecting it into smaller sub-areas. From these sub-areas, a specific focus is selected. Once the specific area is chosen, the researcher raises detailed research questions. Finally, these questions are used to develop clear and measurable research objectives for the study.

13. (C) Discovering an area or question that has not been adequately addressed in previous studies.
A gap area in research refers to a specific topic or question that has not been sufficiently addressed or resolved in existing literature. Identifying such gaps is a primary objective of a literature review, as it justifies the need for a new study. By addressing these missing pieces of knowledge, a researcher can contribute original findings to the field, ensuring that the work is significant and necessary.

NODIA

14. (D) A set of fundamental beliefs and values that guide the research process.
A research paradigm is a comprehensive framework consisting of fundamental beliefs, values, and assumptions that guide the conduct of inquiry. It shapes how a researcher views reality and determines the most appropriate methods for gathering and analyzing data. Common paradigms include positivism, interpretivism, and pragmatism. These paradigms provide the philosophical underpinnings for the entire research process, influencing every stage from problem formulation to final interpretation.

15. (A) a, b, d, and e
A robust research design must be flexible enough to accommodate necessary modifications while remaining focused on the core objectives. It should prioritize the minimization of bias and the maximization of data reliability to ensure credible findings. Essential components include a clear description of the data collection methods and a structured plan for analysis. This blueprint serves as a logical guide, ensuring that resources are utilized efficiently and effectively.

16. (B) A law is a descriptive generalization, while a theory is an explanation of that generalization.
In scientific research, a law provides a descriptive generalization about how a particular phenomenon behaves under specific conditions,

often expressed as a relationship. In contrast, a theory offers a comprehensive explanation for why that phenomenon behaves the way it does. While laws state that something happens consistently, theories provide the underlying mechanisms and logical reasoning that explain the observed patterns in the natural or social world.

17. (B) The principle of subjectivity
Standard research designs are built upon principles that enhance the objectivity and reliability of findings. These include replication, which allows others to verify results, and randomization, which minimizes the influence of extraneous variables. Local control is often used to manage experimental error. Subjectivity, however, is generally avoided in scientific research design, as the goal is to produce findings that are independent of the researcher's own personal biases.

18. (A) Both A and R are true and R is the correct explanation of A.
A critical literature review is far more than a simple summary of previous work; it requires an active engagement with existing scholarship. The researcher must analyze, synthesize, and evaluate the quality and relevance of current studies. This evaluative process is essential for identifying the strengths and weaknesses of the field, which in turn highlights the specific gaps that the new research study aims to fill.

19. (C) A tentative assumption made to test logical or empirical consequences.
A working hypothesis is a preliminary assumption formulated at the beginning of a research project to guide the investigation. It serves as a tentative proposition that allows the researcher to test logical or empirical consequences. As the study progresses and more data is gathered, this hypothesis may be refined, accepted, or rejected. It provides a necessary starting point for systematic inquiry without being a final or proven fact.

20. (D) Reliability
Reliability is a measurement concept focused on the consistency and stability of a research tool over time. A reliable instrument will yield similar results when applied to the same subjects under identical conditions across different occasions. This quality ensures that the data collected is dependable and not subject to random fluctuations. While reliability is necessary for a study's credibility, it must be paired with validity to ensure accuracy.

21. (B) b, c, and d only
Participatory research is designed to address problems relevant to specific communities while empowering those involved. Unlike traditional research, which may prioritize academic knowledge alone, this approach involves participants as active partners throughout the entire process. The ultimate aim is to produce findings that lead to practical action and meaningful social change. By integrating local knowledge with scientific inquiry, it creates solutions that are sustainable and appropriate for the community.

22. (B) The development of scientific knowledge, methods, and ideas over time.
The history of scientific thought examines the evolution of knowledge, methods, and philosophical ideas over time. It traces how different eras have defined and pursued truth, highlighting the shifts in major paradigms and the development of the scientific method. Understanding this history provides researchers with essential context for current practices and allows them to appreciate the intellectual foundations upon which contemporary scientific inquiry and academic disciplines are built.

23. (D) States a relationship exists without specifying the nature or direction.
A non-directional hypothesis asserts that a relationship exists between variables or that there is a difference between groups, but it does not specify the exact nature or direction of that relationship. For example, it might state that a new policy will affect community behavior without predicting whether the effect will be positive or negative. This type of hypothesis is used when the direction of change is unknown.

24. (B) P-2, Q-4, R-3, S-1
Validity refers to the accuracy of a measure, ensuring it captures what it is supposed to. Reliability concerns the consistency or repeatability of those measurements. A research

Downloaded from www.pdf.tube

problem is the specific question or issue that serves as the focus of the investigation. A hypothesis is a formal statement predicting the relationship between two or more variables. Together, these terms form the essential vocabulary for designing and conducting rigorous academic research.

25. (C) To provide a systematic plan of action for the entire research process.
A research design is essential because it provides a comprehensive and systematic plan of action for the entire research process. It outlines the strategies for data collection, the methods for analysis, and the overall framework for answering the research questions. By establishing this roadmap early on, the investigator can ensure that the study is conducted efficiently, minimizes potential bias, and remains focused on achieving its specific objectives.

26. (A) It is suited to the research objective and uses resources economically.
A high-quality research design must be carefully aligned with the specific objectives of the study to ensure that the questions are answered effectively. It should also be economically feasible, making the best use of available resources such as time, money, and personnel. While rigor is necessary, excessive rigidity or complexity can hinder the research process. Suitability and efficiency are the hallmarks of a design that yields results.

27. (D) Mixed-methods research combines elements of both qualitative and quantitative approaches.
Mixed-methods research is an approach that strategically combines qualitative and quantitative elements within a single study. By utilizing both numerical data and in-depth qualitative insights, researchers can gain a more comprehensive understanding of complex phenomena. This method allows for the triangulation of findings, where the strengths of one approach can offset the limitations of the other. It is increasingly valued in diverse fields for providing a richer analysis.

28. (B) After the research problem is defined and the literature review is conducted.
Developing a detailed research plan is a critical phase that occurs once the foundation of the study is set. It typically takes place after the research problem has been clearly defined and a thorough literature review has been conducted. At this stage, the researcher has the necessary context to design a methodology that is appropriate for the topic. This plan then serves as the guide for data collection.

29. (C) The manipulation of an independent variable to observe its effect on a dependent variable.
Experimental design is characterized by the active manipulation of an independent variable to determine its effect on a dependent variable. This process usually involves the use of a control group to provide a baseline for comparison. By maintaining strict control over extraneous variables, researchers can establish causal relationships between factors. This rigorous approach is a cornerstone of scientific inquiry, allowing for the systematic testing of hypotheses under highly structured conditions.

30. (D) a, b, c, and d
A comprehensive research plan should include several vital components to ensure the study is well-organized and feasible. It begins with a clear statement of the research problem and objectives. It must also describe the specific data collection methods to be used. Furthermore, a detailed budget and timeline are necessary for resource management. Finally, a plan for how the findings will be disseminated ensures the research has a significant impact.

31. (A) The entire group sharing common characteristics relevant to the researcher.
In the context of sampling, the term population refers to the entire group of individuals, objects, or events that share common characteristics relevant to the research. The investigator seeks to understand this broad group but usually studies a smaller subset known as a sample. The findings derived from the sample are often generalized back to this larger population. Defining the population clearly is crucial for the external validity of findings.

32. (B) A self-administered form vs. one filled by the researcher during an interview.
The primary distinction between a questionnaire and an interview schedule lies in how the data is recorded. A questionnaire is typically self-administered, meaning the respondent reads and answers the questions independently. In contrast,

NODIA

an interview schedule is a tool used by the researcher, who asks the questions verbally and records the participant's responses. While both can contain similar questions, the administration method significantly influences the interaction and the data collection process.

33. (A) Both A and R are true and R is the correct explanation of A.
Random sampling is a technique where every member of a population has an equal and independent chance of being selected for a study. This method is highly valued because it typically produces a representative sample, which accurately reflects the characteristics of the larger group. By ensuring that the selection process is unbiased, random sampling minimizes sampling error and allows the researcher to generalize findings to the entire population confidently.

34. (A) Independent variable
An independent variable is the factor in a research study that is believed to cause a change in another variable. In experimental research, the investigator actively manipulates this variable to observe its impact. It is often referred to as the predictor or treatment variable. Understanding the role of the independent variable is essential for establishing relationships and testing hypotheses about the cause-and-effect dynamics between different phenomena under investigation.

35. (B) Data processing
Data processing is the crucial stage in research where raw data is converted into a structured, machine-readable format suitable for analysis. This phase involves several technical steps, including editing to ensure accuracy, coding to categorize responses, and tabulation to organize data. Effective processing ensures that the information gathered from the field is clean and manageable. It bridges the gap between the collection of information and the final interpretation of scientific results.

36. (B) II, I, IV, III
The systematic processing of data follows a logical sequence to ensure accuracy and clarity. The first step is editing, where the raw data is checked for errors and completeness. This is followed by coding, where responses are assigned numeric or symbolic categories. Next, the data is classified into meaningful groups based on common characteristics. Finally, tabulation involves organizing the classified data into tables or charts to facilitate the final statistical analysis.

37. (C) Rejects a true null hypothesis.
A Type I error in hypothesis testing occurs when a researcher incorrectly rejects a null hypothesis that is actually true. This is often referred to as a false positive result, where the study claims to find an effect or relationship that does not exist in reality. The probability of committing this error is typically denoted by the significance level, or alpha. Minimizing this risk is critical for ensuring the overall reliability of findings.

38. (B) The extent to which findings from a sample can be applied to the larger population.
Generalization in research refers to the extent to which the findings and conclusions derived from a specific sample can be accurately applied to the broader population. This process is a primary goal of quantitative research, as it allows investigators to draw wider inferences from a limited set of observations. The ability to generalize depends heavily on the representativeness of the sample and the rigorousness of the research design and methodology used.

39. (D) To outline key topics for semi-structured or unstructured verbal inquiries.
An interview guide is a flexible tool used primarily in semi-structured or unstructured interviews to ensure key topics are covered during the conversation. Unlike a rigid script, it allows the researcher to follow the natural flow of the dialogue while probing for deeper insights. This approach is common in qualitative research, where the goal is to explore complex experiences and perspectives in a conversational manner without imposing a strict structure.

40. (A) Convenience sampling
Convenience sampling is a non-probability sampling technique where the researcher selects participants who are the most accessible or easy to reach. While this method is often fast and inexpensive, it is prone to significant bias because the sample may not be representative of the wider population. Consequently, findings from such studies cannot be generalized with

Click Here to Buy book on Amazon

high confidence. It is often used in exploratory research or when resources are severely limited.

41. (A) a, b, and d only
Ethical research conduct is centered on several core principles that protect participants and maintain academic standards. These include obtaining informed consent to ensure voluntary participation and maintaining strict confidentiality of all data collected. Additionally, providing proper credit to all contributors through authorship is essential for academic integrity. Ignoring participant harm or fabricating data are severe violations of these standards. Ethical oversight is required throughout the entire research lifecycle to ensure professional responsibility.

42. (A) By being aware of potential sources of bias and implementing strategies to minimize them.
Minimizing bias is essential for the objectivity and credibility of research findings. The most effective strategy is for researchers to be consciously aware of potential sources of bias, such as personal prejudices or flawed sampling techniques. By implementing rigorous methodologies, such as randomization and standardized data collection procedures, investigators can reduce these distortions. Maintaining a neutral and transparent approach throughout the study helps ensure that the results accurately reflect reality.

43. (D) Adhering to principles of honesty, trust, fairness, respect, and responsibility in all research activities.
Academic integrity is the moral code and ethical policy of academia. It demands that researchers adhere to principles of honesty, trust, fairness, respect, and responsibility in all their professional activities. This includes accurately reporting data, properly citing sources, and conducting research with transparency. Maintaining high standards of integrity is crucial for the credibility of the scientific community and ensures that research findings are dependable and can be used effectively.

44. (B) Using the ideas or words of another person without giving them proper credit.
Plagiarism is a serious ethical violation in research that involves using the ideas, words, or creative work of another person without providing proper credit. This can include direct copying, paraphrasing without citation, or presenting someone else's theories as one's own. It undermines the foundations of intellectual honesty and scholarship. Researchers must ensure that all sources are accurately cited and that the contributions of others are clearly acknowledged to maintain integrity.

45. (C) Informed of the purpose, risks, and benefits before agreeing to participate.
The principle of informed consent is a cornerstone of ethical research involving human participants. It requires that individuals be fully informed about the purpose of the study, the procedures involved, and any potential risks or benefits before they agree to take part. This process ensures that participation is entirely voluntary and that individuals have the autonomy to withdraw at any time. Clear and accessible communication is essential for consent to be informed.

46. (D) The inability of a researcher to link an identity to specific responses.
Anonymity in research is a high level of privacy protection where even the researcher cannot link specific responses or data points to the identity of a participant. This is often achieved by not collecting identifiable information such as names or addresses. It differs from confidentiality, where the researcher knows the identity but promises to keep it private. Ensuring anonymity can encourage participants to provide honest information, thereby improving the overall data quality.

47. (A) Researchers must minimize risks and maximize benefits for participants.
Ethical guidelines in research are designed to protect the dignity and welfare of participants. Researchers are obligated to minimize potential risks and maximize benefits, ensuring that no harm comes to those involved in the study. Participants must also have the absolute right to withdraw from the investigation at any stage without penalty. Deception is generally avoided and is only used under strict ethical oversight when necessary for the scientific integrity.

48. (B) P-4, Q-3, R-2, S-1
Plagiarism involves presenting the work of others as your own without credit. Informed consent is

Downloaded from www.pdf.tube

the process of obtaining voluntary agreement from participants after they understand the study's details. Confidentiality refers to the protection of a participant's identity and personal information. Bias is a systematic error that can lead to distorted research results. Understanding these terms is essential for conducting ethical and professional research that respects participants and maintains standards.

49. (B) The systematic study of disaster causes, effects, and risk management.
Disaster research is a multidisciplinary field focused on the systematic investigation of the causes, effects, and management of various disasters. It encompasses a wide range of topics, including hazard assessment, vulnerability analysis, and the effectiveness of risk management strategies. By studying both natural and man-made events, researchers aim to develop evidence-based practices that improve community resilience and reduce the impacts on society, the environment, and the economy during events.

50. (A) Integrating knowledge from academic disciplines and non-academic stakeholders.
Transdisciplinary research in the context of disasters goes beyond simple collaboration between different academic fields. It involves the integration of knowledge from diverse disciplines alongside the practical insights of non-academic stakeholders, such as community members and policymakers. This holistic approach is essential for addressing complex, real-world problems that cannot be solved by a single discipline alone. By co-producing knowledge, this method leads to more effective, sustainable, and socially relevant strategies.

51. (C) New technologies like GIS, remote sensing, and social media analytics are increasingly used.
Contemporary disaster research has evolved to incorporate advanced technologies that enhance data collection and analysis. Methods such as Geographic Information Systems (GIS), remote sensing, and social media analytics are now widely used to map hazards and monitor disaster impacts in real time. These tools complement traditional techniques like surveys and interviews, providing a more comprehensive understanding of complex events. This technological integration allows researchers to gather large datasets for better risk management.

52. (D) Combines qualitative depth with quantitative breadth for full understanding.
In disaster and humanitarian settings, a mixed-methods approach is highly valuable for its ability to provide a complete picture of a situation. By combining the depth of qualitative interviews with the breadth of quantitative surveys, researchers can understand both the statistical impact of a crisis and the lived experiences of those affected. This synergy allows for the triangulation of data, which enhances the validity and reliability of findings in challenging and environments.

53. (C) Calculating the probability of an event and the potential financial losses.
A quantitative approach to risk assessment focuses on numerical data and statistical models to evaluate potential hazards. This method typically involves calculating the mathematical probability of a specific event occurring and estimating the potential financial or physical losses that might result. By quantifying these factors, researchers can provide clear data to help policymakers prioritize mitigation efforts and allocate resources effectively. It provides a measurable basis for comparing risks and evaluating interventions.

54. (B) Understanding local perceptions, cultural beliefs, and traditional knowledge related to hazards.
A qualitative approach to risk reduction emphasizes understanding the human and social dimensions of hazards. It focuses on exploring local perceptions, cultural beliefs, and traditional knowledge that influence how communities recognize and respond to threats. By using methods like interviews and focus groups, researchers can identify the social vulnerabilities and capacities that quantitative models might miss. This deep understanding is essential for designing disaster mitigation programs that are culturally appropriate and effective.

55. (D) Phenomenology
Phenomenology is a qualitative research approach dedicated to understanding the essence of lived experiences from the perspective of the individuals involved. In a disaster context, a

NODIA

researcher using this method would focus on how survivors describe and make sense of their personal experiences during and after a major event. The goal is to capture the depth and meaning of these experiences, providing a rich, descriptive account that highlights the human impact of disasters.

56. (A) Both A and R are true and R is the correct explanation of A.
Gaining access to disaster-affected communities presents unique ethical and logistical challenges for researchers. Populations may be dealing with severe trauma and urgent needs, which can create a conflict with the long-term goals of scientific inquiry. Researchers must navigate these sensitivities with extreme care, ensuring that their presence does not interfere with relief efforts or cause further distress. Ethical oversight is crucial to balance the need for data with the imperative protection.

57. (C) Grounded theory
Grounded theory is a qualitative methodology where theory is developed inductively from the systematic analysis of data collected in the field. Unlike other approaches that test pre-existing theories, grounded theory begins with a clean slate, allowing the theoretical framework to emerge directly from the participants' experiences. This approach is particularly useful in complex settings, such as post-disaster recovery, where traditional theories may not fully capture the unique social dynamics at play during research.

58. (A) A collaborative approach where community and researchers are equitable partners.
Community-Based Participatory Research is defined by a collaborative approach that treats community members and academic researchers as equitable partners throughout the entire project. Rather than treating people as passive subjects from whom data is extracted, this method involves the community in defining the problem, collecting data, and interpreting the results. This partnership ensures that the research is relevant to the community's needs and fosters local ownership, leading to more sustainable and effective outcomes.

59. (C) a, c, and d only
Quantitative research methods are characterized by the use of standardized tools, such as surveys and questionnaires, to collect data from large samples. The primary focus is on generating numerical data that can be analyzed using statistical techniques. The ultimate goal of this approach is often to test specific hypotheses and generalize the findings to a broader population. This methodology provides a high level of objectivity and allows for the measurement of trends and patterns effectively.

60. (B) Studies on the literary criticism of disaster-themed novels.
Research in Health Emergency and Disaster Risk Management focuses on the intersection of public health and disaster response. This field includes epidemiological studies to track post-disaster disease outbreaks, assessments of damage to medical infrastructure, and investigations into the mental health impacts on responders. While it covers a wide range of social and physical sciences, it generally does not include unrelated topics like the literary criticism of fiction, as its primary goal is improvement.

61. (C) Geographical method
Using satellite imagery and Geographic Information Systems (GIS) to map disaster impacts is a primary example of a geographical research method. These techniques allow researchers to visualize and analyze the spatial distribution of hazards, vulnerability, and damage. By overlaying different layers of data, such as flood extents and population density, investigators can identify high-risk areas and plan response efforts more effectively. This spatial perspective is crucial for understanding the physical and social dimensions of disaster impacts.

62. (D) To gather perishable data through a rapid assessment of disaster impacts.
Disaster reconnaissance is a specialized research activity conducted shortly after an event to gather perishable data that might otherwise be lost. This rapid assessment focuses on documenting the immediate physical and social impacts, such as building damage or community displacement. By capturing this ephemeral information quickly, researchers can provide essential data for understanding disaster dynamics and improving

Click Here to Buy book on Amazon

future risk management. It is not intended for long-term recovery planning but rather for scientific documentation of critical impacts.

63. (A) The researcher has to choose between two equally unsatisfactory alternatives that both involve a conflict of ethical principles.
An ethical dilemma in research occurs when an investigator must choose between two conflicting courses of action, both of which involve important ethical principles. In disaster settings, this might involve the tension between gathering scientific data and the immediate humanitarian obligation to assist a survivor in distress. These situations are complex and have no easy answers, requiring careful reflection and adherence to ethical standards to ensure that the research process remains respectful and minimizes harm.

64. (B) Studying a culture or social group through immersion and observation.
Ethnography is a qualitative research approach where the investigator immerses themselves in the daily life of a culture or social group for an extended period. Through direct observation and participation, the researcher seeks to understand the shared beliefs, behaviors, and social dynamics from an insider's perspective. This method provides a rich, in-depth account of how a group functions within its natural setting, making it useful for exploring the complex social realities of communities affected by disasters.

65. (B) Simulating earthquake effects on urban infrastructure using computer models.
Computational methods in disaster research involve the use of advanced computer models and simulations to understand and predict complex phenomena. A primary example is simulating how earthquakes might affect urban infrastructure, allowing researchers to test different scenarios and mitigation strategies in a virtual environment. These methods can analyze large datasets and model interactions that are difficult to observe in the real world. They provide a powerful tool for enhancing preparedness and improving built environment resilience.

66. (A) An in-depth investigation of a single unit like an event or community.
A case study is a research design that involves an in-depth, detailed investigation of a single unit, such as an individual, a specific community, or a particular disaster event. This approach allows the researcher to explore complex issues within their real-life context using multiple sources of data, including interviews, observations, and documents. The goal is to provide a comprehensive understanding of the specific case rather than to generalize findings to a larger population effectively.

67. (C) Hypothesis testing
Data collection methods are the specific tools and techniques used by researchers to gather information for their studies. Common methods include observation, where the researcher records behaviors; interviews, which involve direct verbal inquiry; and questionnaires, which are structured forms for collecting participant responses. Hypothesis testing, however, is not a collection method but rather a part of the analysis phase where researchers use statistical techniques to evaluate the validity of their initial assumptions based on gathered data.

68. (D) Methodology is the theory and justification, while methods are specific tools.
The distinction between methodology and methods is fundamental in research. Methodology refers to the overall theoretical framework and the logical justification for the choices made during the inquiry process. It encompasses the principles and assumptions that guide the study. In contrast, methods are the specific tools, techniques, and procedures used to collect and analyze data, such as surveys or interviews. While methods are the "how" of research, methodology provides the logical "why."

69. (C) Applied research
Applied research is specifically designed to address a practical problem and generate findings that can lead to direct action or policy recommendations. Unlike pure or fundamental research, which focuses on expanding knowledge for its own sake, applied research is motivated by the need for real-world solutions. In disaster management, this might involve studying the effectiveness of an evacuation plan to provide concrete improvements for future events, ensuring that research has a tangible and beneficial community impact.

NODIA

70. (B) Personal blogs and social media posts are always considered reliable academic sources.
A literature review should primarily rely on reputable academic sources such as peer-reviewed journals, books, and government reports. These sources undergo rigorous review processes, ensuring a higher level of reliability and validity. While personal blogs and social media posts may provide individual perspectives, they are not systematically verified and are generally not considered reliable for academic research. Relying on such unverified sources can undermine the credibility of the research and lead to biased or inaccurate research conclusions.

71. (C) a, b, c, and d
Post-disaster research presents several unique ethical challenges. These include the risk of re-traumatizing vulnerable survivors through interviews and the potential for research activities to interfere with urgent relief efforts. Additionally, the fairness of providing incentives in resource-poor environments and the obligation to share findings with the affected community are critical concerns. Researchers must balance these issues carefully to ensure their work is respectful, responsible, and minimizes harm to populations that have experienced significant loss and trauma.

72. (A) The methods people use on a day-to-day basis to make sense of and accomplish their social world.
Ethnomethodology is a qualitative research approach that focuses on the everyday methods and common-sense reasoning people use to navigate and make sense of their social world. It investigates how individuals produce and maintain social order through their daily interactions and routines. In a disaster context, an ethnomethodologist might study how community members organize themselves and coordinate activities in the absence of formal structures, highlighting the micro-level processes that underpin social resilience and action.

73. (C) Experimental (or quasi-experimental)
An experimental or quasi-experimental design is used when a researcher wants to test the effectiveness of an intervention by comparing a group that receives it with one that does not. In this study, comparing a community with a new cyclone shelter to a similar one without it allows the researcher to observe the intervention's impact. While it may not always involve random assignment in a natural setting, it provides a structured way to evaluate causal relationships between variables.

74. (A) A person's right to control access to themselves and their personal information.
Privacy concerns in research center on the fundamental right of individuals to control access to themselves and their personal information. Researchers have a duty to respect this autonomy by ensuring that participants are fully informed about how their data will be used and by taking steps to protect identities. This involves managing physical access to participants as well as the digital and physical security of the information they provide, ensuring that private lives are respected.

75. (A) V, II, IV, I, III
The research process follows a logical and chronological order to ensure a systematic investigation. It begins with the selection of a specific research problem, which is followed by a thorough literature review and the formulation of hypotheses. Once the groundwork is laid, the researcher proceeds to data collection and then to data analysis and interpretation. The final stage is the writing of the research report, where the findings are presented and the study documented.

76. (B) Thomas Kuhn
The concept of a paradigm in scientific thought was prominently developed and popularized by the philosopher Thomas Kuhn. In his influential work, Kuhn described a paradigm as a shared set of beliefs, values, and techniques that guide a scientific community's work during a period of normal science. He also introduced the idea of a paradigm shift, which occurs when a new framework replaces an old one during a revolution, fundamentally changing how a discipline understands reality.

77. (C) An individual's life story written by that same individual.
An autobiography as a research approach involves an individual writing their own life story, providing a first-person account of their experiences and perspectives. In an academic

Downloaded from www.pdf.tube

context, this narrative can offer deep, personal insights into specific historical events or social phenomena. It allows the researcher to explore the internal world and subjective reality of the author, providing a unique and detailed perspective that other methods, such as interviews or archival reviews, might not fully capture.

78. (D) Understanding physical processes like seismology or hydrology.
Research into natural and environmental disasters requires an understanding of the complex physical processes that cause these events. This involves disciplines like seismology to study earthquakes and hydrology to understand floods. By combining this physical knowledge with social science research, investigators can better assess risks and develop effective mitigation strategies. This integrated approach is essential for a comprehensive understanding of disasters, as it addresses both the physical hazards and the human vulnerabilities that lead to outcomes.

79. (A) Ethnographic research
A study that explores how a coastal community interprets tsunami warnings through their folklore and traditional practices is a classic example of ethnographic research. The researcher seeks to understand the social and cultural context from the participants' perspective, focusing on shared meanings and community life. This approach requires immersion in the community to observe how traditional knowledge interacts with modern warning systems, providing qualitative insights that can help in designing more effective and culturally appropriate preparedness strategies.

80. (B) It focuses on understanding aspects of human society and social behavior.
Social research is fundamentally characterized by its focus on understanding various aspects of human society and social behavior. It investigates how individuals interact with one another and how social structures and institutions shape their lives. By using a range of qualitative and quantitative methods, social researchers aim to uncover the patterns and dynamics that govern human social life. This broad field encompasses topics such as inequality, culture, and community dynamics, providing insights for addressing social challenges.

81. (B) Phenomenology and Ethnography
Phenomenology and ethnography are two widely recognized qualitative research approaches. Phenomenology focuses on exploring the lived experiences of individuals to understand the essence of a particular phenomenon. Ethnography involves the long-term immersion of the researcher in a culture or social group to understand their beliefs and practices from an insider's perspective. Both methods prioritize in-depth, descriptive data and seek to capture the complex social and psychological realities of human life, rather than focusing primarily on numerical measurements.

82. (A) Objectivity and credibility
Identifying and avoiding bias is a critical part of the research process, as it ensures that the findings are objective and credible. Bias can distort results and lead to inaccurate conclusions, undermining the integrity of the study. By using rigorous methods and remaining aware of personal prejudices, researchers can produce work that is dependable and can be trusted by the scientific community. Maintaining objectivity is essential for providing a fair and accurate representation of the phenomena under investigation.

83. (C) The height of floodwater marks on buildings
Perishable data refers to information that can easily disappear or be altered shortly after a disaster occurs. An example is the height of floodwater marks on buildings, which may be washed away or painted over during initial cleanup and recovery. Collecting this data through rapid reconnaissance is essential for accurately documenting the disaster's physical impact. This information provides vital evidence for validating flood models and improving future hazard maps, making it a priority for scientific reconnaissance.

NODIA

84. (D) The probability that the observed result is due to chance.
The significance of a hypothesis in statistical testing refers to the probability that the observed results occurred by chance. This is typically measured by the p-value; a lower p-value indicates that the findings are less likely to be accidental, suggesting a meaningful relationship between the variables. This concept allows researchers to determine whether their data supports the

initial hypothesis with a high level of confidence. It is a fundamental part of the rigorous analysis required in research.

85. (C) A qualitative ethnographic study involving participant observation.
An ethnographic study involving participant observation is the most effective method for exploring the complex social dynamics and power structures within a temporary shelter. This approach allows the researcher to experience daily life alongside the displaced individuals, providing deep insights into their interactions and shared experiences. Unlike surveys, which provide a snapshot of data, ethnography captures the nuanced social relationships and informal systems that develop in such high-stress environments, offering a rich and comprehensive understanding of community life.

86. (A) Both A and R are true and R is the correct explanation of A.
Community-Based Participatory Research is highly effective for disaster risk reduction because it leverages local knowledge and fosters a sense of community ownership. By involving community members as equitable partners, CBPR ensures that risk reduction initiatives are culturally appropriate and meet the actual needs of the people. This collaborative approach leads to more sustainable outcomes, as residents are more likely to support programs they helped create. It empowers communities, building their resilience from the ground up through participation.

87. (D) The blueprint for selecting a portion of the population for study.
A sample design is a critical component of a research plan, acting as the blueprint for selecting a portion of the population for study. It specifies the techniques and procedures the researcher will use to ensure that the chosen sample is representative of the larger group. A well-constructed sample design is essential for the external validity of the study, as it determines how confidently the findings can be generalized from the small group to the entire population.

88. (A) False negative
A Type II error in hypothesis testing is also known as a false negative. It occurs when a researcher fails to reject a null hypothesis that is actually false. In other words, the study concludes that there is no effect or relationship when one actually exists in reality. This error can occur due to a small sample size or an insensitive measurement tool. Minimizing Type II errors is important for ensuring that real and potentially important findings are not missed.

89. (B) a, c, and d only
Data collection tools are the specific instruments used by researchers to gather information from participants. Common examples include interview schedules, which are structured lists of questions used by an interviewer, and questionnaires, which are self-administered forms. An interview guide provides a more flexible framework for semi-structured conversations. Generalization, however, is not a tool but a process of drawing broader conclusions from a sample. Using appropriate tools is essential for gathering high-quality, relevant data to answer research questions.

90. (A) Ensuring extra protections are in place to prevent exploitation and harm.
Working with vulnerable populations, such as children or the elderly, requires extra ethical protections to prevent exploitation and ensure no harm comes to them. These individuals may have limited capacity to provide truly informed consent or may be more susceptible to physical or psychological distress during research. Investigators must implement additional safeguards, such as simplified consent processes and closer monitoring of participant well-being, to uphold the principles of respect for persons and justice, ensuring ethical standards.

91. (D) Collecting and analyzing the stories that people tell about their experiences.
Narrative research is a qualitative approach that centers on collecting and analyzing the stories people tell about their personal experiences. By exploring these individual accounts, researchers can gain deep insights into how people make sense of their lives and the events they have lived through. This method values the subjective reality of the participant, providing a rich, descriptive perspective that highlights the human and personal dimensions of social phenomena. It is often used to explore identity through a biographical lens.

Click Here to Buy book on Amazon

92. (B) Clearly defining the research problem and objectives.
The first step in developing a comprehensive research plan is to clearly define the research problem and the specific objectives of the study. This foundation is essential for guiding all subsequent decisions, from selecting the methodology to determining the data collection and analysis techniques. A well-defined problem ensures that the investigation remains focused and that the results will be relevant and meaningful. Without this clarity, the research process can become disorganized, leading to failure in addressing issues.

93. (C) The guide is more flexible and open-ended, while the schedule is more structured and standardized.
The primary difference between an interview guide and an interview schedule is their level of structure. An interview guide is flexible and open-ended, outlining key topics but allowing the conversation to flow naturally. This is typical in qualitative research. An interview schedule, however, is a structured and standardized list of questions that the interviewer reads verbatim to every participant. This method is used in quantitative studies to ensure consistency across multiple interviews, allowing for straightforward comparisons and statistical analysis.

94. (D) Stratified sampling
Stratified sampling is a probability sampling technique where the population is first divided into homogeneous subgroups, or strata, based on specific characteristics like age or income. A random sample is then drawn from each of these strata. This method ensures that all relevant subgroups are adequately represented in the final sample, which can improve precision and allow for comparisons between groups. It is particularly useful when the population is heterogeneous and certain groups are relatively small but important.

95. (A) Response and recovery
In Health-EDRM research, assessing the surge capacity of hospitals for mass casualty incidents is a key part of studying response and recovery. Surge capacity refers to the ability of a healthcare system to expand its usual operations to manage a sudden and significant increase in patient volume during a crisis. Understanding these limits is essential for effective emergency planning, ensuring that medical facilities can provide life-saving care. This research helps identify potential bottlenecks and improves the overall resilience of health systems.

NODIA

96. (B) b, c, and e only
Violations of academic integrity include severe misconduct such as fabricating data, which involves inventing fake results, and falsifying information to hide flaws in the research design. Plagiarism, the act of using another person's words or ideas without citation, is also a major breach of ethical standards. These actions undermine the trust and honesty necessary for scholarly work. Researchers are obligated to report their methods and results accurately and give proper credit to contributors to maintain academic standards.

97. (B) Ontological and epistemological assumptions.
A researcher's paradigm is deeply connected to their ontological and epistemological assumptions. Ontology concerns the nature of reality—whether it is an objective truth or socially constructed. Epistemology deals with the nature of knowledge—how we can come to know that reality. These fundamental beliefs shape the entire inquiry process, influencing the choice of research questions, methodology, and methods. By understanding their own paradigm, researchers can be more transparent about the perspectives and assumptions that guide their work and results.

98. (A) Systematically evaluate the quality, relevance, and contribution of existing studies.
A critical literature review demands a systematic and rigorous evaluation of existing research. The researcher must assess the quality, relevance, and contribution of each study to the broader field. This process goes beyond simple summary, requiring an analysis of the methodologies, theoretical frameworks, and findings of previous works. By critically engaging with the literature, the investigator can identify consistent patterns, contradictory results, and significant gaps, which provides a strong justification and a clear direction for their inquiry.

99. (C) A concept or characteristic that can take on different values.

In the context of research, a variable is a specific concept, characteristic, or quality that can take on different values across individuals or groups. Variables are the building blocks of research questions and hypotheses, representing the factors that are measured or manipulated. Examples include age, income, temperature, or levels of disaster preparedness. Understanding how to define and measure variables is essential for research, as it allows investigators to explore relationships, identify patterns, and test theories about the world.

100. (B) P-3, Q-4, R-1, S-2
Different research tools are suited for specific applications. A questionnaire is typically used for large-scale surveys with standardized, closed-ended questions. An interview guide facilitates in-depth, semi-structured conversations with individuals. An observation checklist allows for the systematic recording of behaviors in their natural setting. A focus group guide is designed to lead discussions among a group of people to explore shared experiences. Using the right tool ensures that the data collected is relevant and high-quality for rigorous academic analysis.

101. (C) Assigns meaning to the analyzed data and draws conclusions.
Data interpretation is the critical phase where a researcher assigns meaning to the analyzed data and draws final conclusions. During this stage, the investigator looks for patterns, trends, and relationships within the findings, connecting them back to the original research questions and the broader theoretical framework. Effective interpretation involves explaining what the results mean in a real-world context, discussing the implications of the study, and identifying any limitations. It is the step that turns raw information into knowledge.

102. (B) The principle of randomization
The principle of randomization is a key concept in research design that helps to minimize the influence of extraneous factors. By randomly assigning participants to different groups or randomly selecting elements for a study, the researcher ensures that these outside variables are distributed equally across all conditions. This process helps to reduce bias and ensures that any observed differences in the outcome can be more confidently attributed to the independent variable being tested rather than to some other uncontrolled environmental factor.

103. (D) Definitional
Standard types of hypotheses used in research include directional, which predicts a specific outcome; non-directional, which states a relationship exists without specifying its nature; and null, which predicts no relationship or difference. These hypotheses provide a formal framework for testing assumptions through data analysis. A definitional hypothesis, however, is not a recognized type in standard methodology. Hypotheses are central to the scientific method, as they allow researchers to systematically evaluate their ideas and contribute to new knowledge development.

NODIA

104. (A) A geographical method for disaster research
Using Geographic Information Systems (GIS) to overlay maps of hazard areas, population density, and infrastructure is a prime example of a geographical method for disaster research. These spatial tools allow investigators to visualize and analyze complex relationships between geography and vulnerability. By identifying where high-risk zones overlap with critical services and people, researchers can provide essential data for effective mitigation and emergency planning. This approach highlights the spatial dimension of risk, offering a unique perspective vital for comprehensive management.

105. (A) Both A and R are true and R is the correct explanation of A.
Plagiarism is universally recognized as a serious breach of academic integrity because it fundamentally undermines the core principles of intellectual honesty. Proper attribution of scholarship is essential for the advancement of knowledge, as it allows for the fair recognition of individuals' contributions to the field. When a researcher fails to acknowledge sources, they compromise the trust and transparency upon which the scientific community is built. Adhering to strict citation standards is necessary to uphold ethics and the credibility of research.

106. (A) To understand context, experiences, and social processes that numbers cannot capture.

In disaster and humanitarian settings, a qualitative approach is often necessary because it allows researchers to understand the complex social processes and personal experiences that numbers alone cannot capture. These methods provide essential context, exploring how people make sense of crisis and what factors influence their recovery. By focusing on meaning and lived reality, qualitative research offers deep insights vital for designing interventions that are responsive to the actual needs and cultural sensitivities of the affected populations during crises.

107. (D) A historical/documentary analysis
To understand the evolution of disaster management policy over 50 years, a historical or documentary analysis is the most appropriate research method. This approach involves a systematic review of government reports, legislation, and other archival materials to trace changes in policies and the reasons behind them. It allows the researcher to place current practices in a long-term context, identifying significant trends and turning points. Unlike experiments, historical analysis provides the necessary temporal depth to explore how practices have developed.

108. (B) The literature review and problem formulation.
The development of a working hypothesis is a crucial step that typically follows the initial formulation of the research problem and a thorough review of existing literature. By this stage, the researcher has gathered enough information to make a tentative assumption about the relationship between the variables being studied. This working hypothesis then provides a focus for the subsequent research design and data collection phases, allowing the investigator to systematically test ideas and contribute new evidence to their field.

109. (C) It involves a cyclical process of reflection and action by the practitioners themselves.
A key feature that distinguishes action research from applied research is its focus on a cyclical process of reflection and action conducted by practitioners themselves. While applied research aims to solve practical problems, action research involves an iterative cycle of planning, acting, observing, and reflecting within a specific context. This approach empowers those involved to improve their own practices and solve local issues directly. It prioritizes the active involvement of participants in the research and the implementation of solutions.

110. (D) Researchers must "do no harm" and minimize their footprint on the community.
Disaster reconnaissance must be guided by the fundamental ethical principle of "do no harm." Researchers have a duty to minimize their footprint on the affected community, ensuring that activities do not interfere with life-saving relief or recovery efforts. Survivor well-being must always be the top priority, and informed consent remains necessary even in urgent situations. By conducting themselves with sensitivity and respect, researchers can gather essential data without causing further distress or burden to people who have experienced loss.

111. (A) Purposely phrasing questions to lead respondents to a desired answer.
Constructing an effective questionnaire involves several key principles, such as using clear language and ensuring that every question is directly relevant to the study's objectives. It is also essential to pilot-test the instrument before deployment to identify and correct any potential issues. However, researchers must never purposely phrase questions to lead respondents toward a desired answer. This type of biased questioning compromises data objectivity and leads to invalid conclusions, violating the core standards of academic integrity and research.

112. (B) A fundamental change in the basic concepts and practices of a scientific discipline.
In the context of scientific thought, a paradigm shift signifies a fundamental change in the basic concepts and practices of a scientific discipline. This occurs when a new framework replaces an old one, fundamentally altering how researchers view reality and conduct their work. These shifts often happen during scientific revolutions when existing theories can no longer explain new observations. A paradigm shift represents a significant leap in understanding, leading to a new era of theoretical development within a specific academic field.

Downloaded from www.pdf.tube

113. (B) Research question
The statement "What are the coping mechanisms of communities living in chronically flood-prone areas?" is best described as a research question. It is an inquiry that sets the direction for a study, identifying the specific phenomenon the researcher intends to explore. Unlike a hypothesis, which is a tentative answer, a research question provides the focus for the investigation without predicting a specific outcome. It serves as the starting point for the research process, guiding the development of appropriate methodology and tools.

114. (A) An ethnography
A study that aims to provide a detailed and in-depth description of the culture within a disaster response team is a primary example of an ethnography. This qualitative approach involves the long-term observation of the team's daily interactions, shared beliefs, and informal norms. By immersing themselves in the team's environment, the researcher can gain a rich understanding of how members work together and make sense of their high-pressure roles. This method provides a comprehensive perspective that quantitative surveys cannot capture.

115. (C) A context for understanding how knowledge and research methods have evolved.
The history of scientific thought provides researchers with essential context for understanding how knowledge, theories, and research methods have evolved over time. By studying this history, investigators can appreciate the philosophical underpinnings of current practices and recognize that scientific understanding is a dynamic and ongoing process. This historical perspective allows for a more critical engagement with contemporary research, as it highlights the shifts in paradigms and the intellectual debates that have shaped various academic disciplines within the scientific community.

116. (D) Test-retest method
The test-retest method is a primary technique used to ensure the reliability of a research instrument. This involves administering the same tool to the same group of participants on two different occasions under similar conditions. If the instrument is reliable, it should produce consistent and stable results across both applications. This consistency is vital for ensuring that the data collected is dependable and not subject to random errors or fluctuations over time, which is essential for the credibility of findings.

117. (C) A case study
To develop an in-depth understanding of the complex decision-making process of a single incident commander during a major event, a case study is the most appropriate research approach. This method allows for a detailed investigation of the individual's experiences and the specific context of their actions using multiple sources of data, such as interviews and documents. Unlike large-scale surveys, which provide broad trends, a case study captures the nuanced and personal dimensions of high-stakes leadership, offering a comprehensive perspective.

118. (B) The researcher can estimate the probability of each population element being included in the sample.
A defining characteristic of a probability sample is that every element of the population has a known, non-zero chance of being included in the study. This allows the researcher to estimate the probability of selection for each member, which is essential for obtaining a representative sample. Probability sampling methods, such as simple random or stratified sampling, minimize selection bias and allow for the use of statistical techniques to generalize findings from the sample back to the larger population confidently.

NODIA

119. (D) Gathering valid data and the imperative to protect vulnerable participants.
A key ethical dilemma in disaster research is the tension between the scientific imperative to gather valid, high-quality data and the fundamental ethical obligation to protect vulnerable participants. Researchers must navigate this balance carefully, ensuring that their presence and inquiries do not cause further distress or harm to survivors who have already experienced trauma. This dilemma requires researchers to be sensitive, flexible, and deeply committed to the principles of "do no harm" and respect for persons throughout all phases.

120. (C) a, b, and c only

Research in Health Emergency and Disaster Risk Management encompasses several critical areas, including the surveillance of infectious diseases in the aftermath of a disaster and the assessment of the nutritional status of affected populations. It also involves evaluating the psychological impact on health workers who are on the front lines of a crisis. These areas are essential for improving the resilience of healthcare systems. While other fields study building resistance, Health-EDRM focuses primarily on health-related outcomes and medical performance.

121. (C) The collaboration with and empowerment of the people being studied.
The primary difference between participatory research and traditional social research lies in its emphasis on collaboration with and the empowerment of the people being studied. In participatory approaches, community members are not passive subjects but active partners who contribute their knowledge and expertise throughout the entire research process. The goal is to co-produce findings that lead to meaningful change and solve problems relevant to the participants' own lives, fostering a sense of ownership and ensuring sustainable and effective outcomes.

122. (A) Whether the researcher has the necessary skills, resources, and time to conduct the study.
Feasibility in the context of formulating a research problem refers to whether the investigator has the necessary skills, resources, time, and access to conduct the study effectively. It involves a realistic assessment of the logistical and practical aspects of the research, ensuring that the project can be completed as planned. Considering feasibility is essential to prevent over-ambitious studies that may fail due to a lack of funding, technical expertise, or the ability to reach the required data sources.

123. (D) Experimental Research - Narrative inquiry
In research, different approaches are associated with specific methodologies. Experimental research is primarily used to test causal relationships through the manipulation of variables, while narrative inquiry is a qualitative approach focused on the analysis of personal stories and lived experiences. Therefore, pairing experimental research with narrative inquiry is incorrect, as they represent fundamentally different paradigms and methods of inquiry. Accurate pairing is essential for maintaining the logical consistency and methodological rigor required for high-quality, credible research in all disciplines.

124. (B) Structure that guides the research, based on existing theory.
The theoretical framework of a research study provides the essential structure that guides the investigation, based on established theories and concepts within the field. It acts as a logical foundation, helping to explain the connections between different variables and providing a basis for developing hypotheses. This framework allows the researcher to situate their work within the existing body of scholarly knowledge, offering a roadmap for data collection, analysis, and the final interpretation of findings in a coherent manner.

125. (C) Quantitative research
Hypothesis testing is a central process in quantitative research, where investigators use statistical techniques to evaluate the validity of their initial assumptions based on numerical data. This approach is designed to determine the probability that a relationship or difference observed in a sample is not due to chance alone. By systematically testing these hypotheses, researchers can reach objective conclusions and generalize their findings to a larger population. This rigorous, deductive process is a cornerstone of the scientific method.

126. (D) The intermediate phase between data collection and data analysis, involving editing and coding.
Data processing is the intermediate phase of the research process that occurs between data collection and final data analysis. It involves several critical activities, such as editing the raw data for errors or omissions and coding responses into standardized categories. This ensures that information is in a clean, organized, and manageable format suitable for computer entry and statistical testing. Effective data processing is essential for the accuracy and reliability of final results, bridging the gap between field work and interpretation.

Click Here to Buy book on Amazon

127. (A) a, b, and d only
Legitimate academic sources for a literature review include peer-reviewed journal articles, official reports from international organizations like the UNDRR, and doctoral dissertations. These sources undergo rigorous verification and evaluation processes, ensuring they are credible and provide a solid foundation for research. In contrast, fictional novels and unverified social media posts are not based on systematic inquiry and are generally not considered appropriate for scholarly work. Relying on reliable, verified sources is essential for maintaining the integrity and academic quality.

128. (B) The community participates as equitable partners in all phases of the research.
The fundamental principle of Community-Based Participatory Research is that community members are involved as equitable partners throughout all phases of the study. This collaboration begins with defining the research problem and continues through data collection, analysis, and the dissemination of findings. By treating the community as more than just subjects, CBPR ensures that research is relevant to needs and fosters local ownership. This partnership between researchers and community residents leads to more effective, sustainable, and socially just disaster management.

129. (B) Provide a flexible framework of topics to be covered during the conversation.
The main objective of an interview guide is to provide a flexible framework of key topics and themes to be covered during a semi-structured or unstructured conversation. It ensures that the researcher addresses all relevant areas while allowing the interview to follow a natural flow and letting the participant's unique perspective emerge. This approach is highly valued in qualitative research for its ability to gather deep, detailed insights into complex experiences, as it encourages open communication without being rigid.

130. (A) Ethnography
A researcher who immerses herself in a post-disaster community for an extended period to understand their recovery process is using an ethnographic approach. This method involves direct observation and participation in the daily lives of community members to gain an insider's perspective on their shared beliefs and social dynamics. By spending significant time in the field, the researcher can provide a rich, detailed, and nuanced account of the recovery process, highlighting the complex social realities that quantitative surveys may fail to capture.

NODIA

131. (A) IV, II, I, III
The historical development of scientific thought followed a chronological progression from pre-scientific ideas based on authority and tradition to more structured frameworks. This was followed by positivism, which emphasized objective measurement and the scientific method. Post-positivism emerged as a refinement, acknowledging the potential for bias and the limits of absolute objectivity. Finally, constructivism became prominent, focusing on the idea that reality is socially constructed. Understanding this sequence provides essential context for the evolution of the various paradigms guiding research.

132. (D) Sampling bias
Sampling bias occurs when a research study only surveys a specific subgroup of the population that is not representative of the whole, such as wealthy neighborhoods in a study on disaster preparedness. This leads to skewed results that do not accurately reflect the experiences or attitudes of the entire community. Because certain groups are excluded, findings cannot be generalized with confidence. Avoiding this error is essential for ensuring the external validity and overall credibility of research results and conclusions.

133. (C) It is a very broad and general statement covering all aspects of a field.
A well-formulated research problem should be stated clearly and unambiguously, identifying the specific relationship between two or more variables that will be investigated. It must also be amenable to empirical testing, meaning it can be addressed through systematic data collection and analysis. A problem that is too broad or general lacks the focus necessary to guide a study effectively. Clarity and specificity are essential for ensuring that research objectives are achievable and that the findings will be meaningful and relevant.

for participation is often acceptable, the amount must not be so high that it pressures vulnerable individuals to take part against their better judgment. Researchers have a fundamental obligation to ensure that participation is voluntary and that the principle of "do no harm" is upheld, protecting the autonomy and dignity of survivors.

177. (B) Ethnography
Ethnography is a qualitative research approach specifically focused on describing and understanding the culture of a particular social group. This method involves the long-term immersion of the researcher in the group's natural setting to observe their daily interactions, shared beliefs, and informal practices. By gaining an insider's perspective, the ethnographer can provide a rich, detailed, and nuanced account of how the group functions. This deep understanding is essential for exploring the complex social realities of diverse communities and for developing culturally sensitive interventions.

178. (A) Community-Based Participatory Research
In the context of disaster research, CBPR stands for Community-Based Participatory Research. This approach emphasizes the collaborative partnership between academic researchers and community members throughout the entire research process. Rather than treating people as passive subjects, CBPR involves the community as equitable partners in defining the problem, collecting data, and interpreting the findings. This collaboration ensures that research is relevant to the community's needs and fosters a sense of local ownership, leading to more sustainable and effective disaster management outcomes.

179. (C) Control group
In an experimental study, the group that receives the standard treatment or no intervention at all is known as the control group. It serves as a baseline for comparison against the experimental group, which receives the new method or treatment being tested. By comparing the outcomes of these two groups, the researcher can determine the specific impact of the independent variable. This use of a control group is a fundamental part of the experimental design, ensuring any observed changes are significant.

180. (D) To conduct a rapid scientific assessment of disaster impacts and collect perishable data.
The primary aim of disaster reconnaissance is to conduct a rapid scientific assessment of disaster impacts and collect perishable data that would otherwise be lost. This specialized research activity focuses on documenting the immediate physical and social consequences of an event, such as building failures or community displacement. By capturing this ephemeral information quickly, scientific teams provide essential evidence for understanding disaster dynamics and for improving future risk models and mitigation strategies. This rapid documentation enhances resilience.

181. (A) a, b, and d only
Narrative research, phenomenology, and ethnography are recognized as major qualitative research approaches. Each focuses on exploring complex human experiences and social processes through in-depth inquiry. Narrative research analyzes individual stories, phenomenology investigates the essence of lived experiences, and ethnography describes group cultures. Statistical regression and factor analysis, however, are quantitative techniques used for numerical data. Understanding these distinctions is essential for selecting the most appropriate methodology and methods to address specific research questions and objectives in multiple academic disciplines.

182. (B) Formulating the hypothesis
Data processing is a technical phase of research that includes activities such as editing raw data for errors, coding responses into standardized categories, and classifying information for analysis. These steps ensure that the data is clean, organized, and ready for statistical testing. Formulating a hypothesis, however, is a part of the initial research design and problem definition phase, not data processing. Maintaining this clear distinction between the different stages of the research process is essential for conducting systematic and rigorous scientific investigations.

183. (D) The method of administration.
The main difference between an interview schedule and a questionnaire lies in the method of administration. A questionnaire is typically self-administered, meaning the respondent reads and answers the questions independently. In contrast,

Downloaded from www.pdf.tube

allowing researchers to both predict and explain natural phenomena.

141. (C) Collecting and analyzing data effectively to achieve objectives.
The primary purpose of a research design is to provide a structured framework for effectively collecting and analyzing data to achieve the study's objectives. It outlines the specific strategies, methods, and techniques that will be used, ensuring that the investigation is conducted in a systematic and logical manner. A well-constructed design minimizes potential bias and ensures that resources, such as time and money, are utilized efficiently. It serves as the blueprint for the entire project, guiding credible results.

142. (D) Both the researchers and the community members, who bring different but equally valid expertise.
In participatory research, both the academic researchers and the community members are considered experts who bring different but equally valid forms of knowledge to the project. While researchers contribute technical and methodological expertise, community members provide deep, contextual understanding based on their lived experiences. This collaborative approach values diverse perspectives, ensuring that research is relevant to the community's needs and that solutions developed are sustainable and appropriate. This mutual respect is fundamental for successful and equitable participatory inquiry.

143. (A) Choosing between protecting a survivor's privacy and reporting a critical public health risk they disclosed.
A significant ethical dilemma in disaster research arises when an investigator must choose between protecting a participant's privacy and addressing a critical public health risk they disclosed during a study. This tension between confidentiality and the duty to prevent harm is complex and requires careful consideration of ethical standards and professional responsibilities. These types of dilemmas are common in crisis settings, highlighting the need for researchers to navigate difficult ethical choices while maintaining respect for participants.

144. (D) a, b, c, and d
Choosing the right research method is primarily driven by the specific research questions being asked. Qualitative methods are well-suited for understanding the "why" and "how" of complex phenomena through in-depth inquiry, while quantitative methods are ideal for measuring the extent or frequency of patterns through numerical data. Mixed-methods research strategically combines both approaches to leverage respective strengths and provide a comprehensive understanding. Together, these principles guide researchers in designing studies that are both rigorous and appropriate for goals.

NODIA

145. (B) Longitudinal study
A longitudinal study design involves collecting data from the same cohort of individuals over an extended period, such as interviewing disaster survivors every five years. This approach allows researchers to track changes and developments over time, providing valuable insights into the long-term impacts of events and the evolution of recovery processes. Unlike cross-sectional studies, which capture a single point in time, longitudinal research highlights temporal patterns and can help identify the factors that contribute to sustained community resilience.

146. (A) A provisional or tentative proposition for testing.
A working hypothesis is best described as a provisional or tentative proposition that is formulated to be tested during the research process. It serves as a necessary starting point for investigation, allowing the researcher to explore the logical or empirical consequences of initial assumptions. As more data is gathered, this hypothesis can be refined, accepted, or rejected. It is not a final conclusion or a proven fact but rather a tool that provides focus for systematic scientific inquiry.

147. (C) Ethnomethodology
A study that explores how individuals make sense of their everyday lives and maintain social order through their daily routines is using the approach of ethnomethodology. This qualitative methodology investigates the micro-level processes of interaction and the common-sense reasoning that people use to navigate their social world. By focusing on these mundane activities, researchers can uncover the foundational

is no relationship between disaster awareness campaigns and household preparedness levels is a null hypothesis. This provides a formal baseline for statistical testing, where the researcher's goal is often to see if there is enough evidence to reject this assumption. It is a fundamental part of the scientific method, allowing for a structured and objective scientific evaluation.

163. (C) Manipulation of an independent variable and control of extraneous variables
The primary feature of an experimental design is the manipulation of an independent variable and the strict control of extraneous factors. This allows the researcher to isolate the effects of the treatment and observe its impact on the dependent variable. By using control groups and randomization, investigators can establish causal relationships with a high degree of confidence. This rigorous methodology is essential for testing hypotheses under highly structured conditions, ensuring that any observed differences are truly due to research intervention.

164. (D) The data collected is kept confidential and/or anonymous.
In the context of ethics, privacy concerns are primarily addressed by ensuring that the data collected from participants is kept confidential and, when possible, anonymous. Researchers must implement clear procedures for protecting personal information and identities throughout the entire study. This respect for privacy is essential for maintaining the dignity of participants and building trust, especially when sensitive information is involved. By taking these steps, investigators uphold fundamental ethical standards and ensure that their work is respectful.

165. (C) The methods people use to make sense of and produce their social world.
Ethnomethodology is a research approach that focuses on the everyday methods people use to make sense of and produce their social world. It investigates the micro-level processes of interaction and the common-sense reasoning that individuals use to navigate their daily lives. In a disaster context, researchers might use this approach to understand how people coordinate their activities and maintain social order in high-stress situations. By focusing on these foundational methods, ethnomethodology provides insights into experienced reality.

166. (B) Understanding social factors that shape vulnerability and risk perception.
Qualitative approaches to risk assessment are valuable for understanding the complex social factors that shape individual and community vulnerability and risk perception. These methods, such as interviews and focus groups, explore the cultural beliefs, personal experiences, and social dynamics that influence how people recognize and respond to hazards. By providing this deep context, qualitative research helps to identify the human dimensions of risk that quantitative models may miss, ensuring that disaster reduction strategies are comprehensive and culturally sensitive.

167. (D) Hypothesis - A proven fact that requires no further testing.
In research terminology, a hypothesis is defined as a tentative and testable assumption about the relationship between variables, not a proven fact. While validity and reliability concern the accuracy and consistency of measures, and a sample is a subset of a population, a hypothesis remains subject to empirical testing. It is the starting point for scientific inquiry, providing a focus for data collection and analysis. Once tested, it may be supported or rejected, but is never unchangeable truth.

168. (A) Build an evidence base to improve healthcare system resilience.
The main purpose of research in Health Emergency and Disaster Risk Management is to build a robust evidence base to improve the resilience of healthcare systems. This involves investigating how medical facilities and public health networks can better prepare for, respond to, and recover from crises. By focusing on health-related outcomes, such as disease surveillance and mental health support, this research contributes to more effective policies and practices that protect lives and maintain essential health services during catastrophic events.

169. (C) Developed inductively from the systematic analysis of collected data.
In grounded theory, the researcher does not begin with a fixed hypothesis or theory. Instead, theory

Click Here to Buy book on Amazon

in the real world. Unlike pure research, which aims to expand fundamental knowledge, applied research is motivated by the need for concrete solutions that can lead to direct action or policy changes. In fields like disaster management, this might involve investigating the most effective ways to encourage community evacuation, ensuring that research results have a tangible and beneficial impact on local society.

156. (B) Confidentiality
Confidentiality is a fundamental ethical principle that obligates researchers to protect the personal information and identities of their participants. This involves ensuring that any data collected is stored securely and that individuals are not identifiable in the final research reports. Maintaining confidentiality is essential for building trust with participants, particularly when exploring sensitive topics. It is a key part of the broader commitment to "do no harm" and respects the privacy and dignity of all research contributors.

157. (C) Dependent variable
In a research study, the dependent variable is the factor that is measured to observe the effect of the experimental manipulation or changes in the independent variable. It represents the outcome or response that the researcher is trying to explain or predict. Understanding the role of the dependent variable is essential for testing hypotheses and establishing relationships between different factors. By measuring this variable accurately, investigators can determine the impact of their interventions and contribute to comprehensive research understanding.

158. (A) a, b, and c only
Geographical methods for disaster research focus on the use of spatial tools and analysis to understand hazards and vulnerability. Key techniques include using Geographic Information Systems (GIS) to map risk zones and remote sensing to assess damage in the aftermath of an event. Spatial analysis of disease outbreaks after a flood is also a primary example. While interviews about personal meaning are qualitative, they do not fall under this technical category. These tools are vital for effective mapping.

159. (A) The difficulty of integrating different disciplinary languages, methods, and epistemologies.
A significant challenge in conducting transdisciplinary research is the difficulty of integrating different disciplinary languages, methods, and epistemologies. Researchers from diverse backgrounds may have different ways of defining problems and evaluating evidence, which can create barriers to effective collaboration. Additionally, incorporating the perspectives of non-academic stakeholders adds another layer of complexity. Successfully navigating these differences is essential for co-producing knowledge that is both scientifically rigorous and practically useful for solving complex, real-world problems like disaster management crises.

160. (B) Discovering results that contradict the initial hypothesis
Standard forms of research misconduct include the fabrication of data, the falsification of results, and plagiarism. These actions are considered serious ethical violations as they undermine the honesty and trust essential for scholarly work. However, discovering results that contradict an initial hypothesis is a natural and important part of the scientific process, not a form of misconduct. Researchers are obligated to report their findings truthfully, whether or not they support their original assumptions, to ensure scientific knowledge progress.

161. (B) Gain a rich, in-depth understanding of a specific, bounded system.
A case study approach is most useful when a researcher wants to gain a rich, in-depth understanding of a specific, bounded system, such as an individual, a community, or a single disaster event. This methodology allows for the exploration of complex issues within their real-life context using multiple sources of evidence. Unlike large-scale surveys, which focus on general trends, case studies capture the unique and detailed aspects of a particular situation, providing comprehensive insights grounded in specific realities.

162. (A) Null hypothesis
A null hypothesis predicts that there is no relationship or difference between the variables being studied. For example, stating that there

Downloaded from www.pdf.tube

methods that underpin larger social structures, providing deep insights into social reality as produced and experienced by individuals.

148. (D) To provide a systematic and logical roadmap for conducting the study.
The key principle behind developing a research plan is to provide a systematic and logical roadmap for conducting a study. This plan outlines the entire research process, from defining the problem to data collection and final analysis, ensuring that the investigation is organized and focused. By establishing this guide early on, the researcher can manage resources effectively and anticipate potential challenges. A clear research plan is essential for maintaining rigor and ensuring that final results are credible.

149. (C) Identifying and diagnosing a problem in a specific context.
The first step in conducting action research is typically identifying and diagnosing a specific problem within a particular context. This approach is highly practical, as it focuses on addressing immediate issues faced by practitioners or community members. Once the problem is clearly defined, the researcher can develop and implement an intervention through a cyclical process of planning, action, observation, and reflection. This focus on local problems ensures that research results in tangible improvements and empowers participation.

150. (A) Both A and R are true and R is the correct explanation of A.
Obtaining truly informed consent in disaster settings can be challenging because survivors may be in a state of high distress or feel a sense of coercion due to their situation. Their focus on immediate needs and the presence of aid workers can compromise their ability to make fully voluntary and understood decisions about participation. Researchers must navigate these issues with extreme care, implementing sensitive processes that prioritize the well-being and autonomy of participants, ensuring their rights.

151. (D) To identify conceptual frameworks used in previous studies.
A key reason for conducting a critical literature review is to identify the conceptual frameworks that have been used in previous studies. Understanding how other researchers have structured their investigations and defined key concepts helps the new researcher to position their own work within the field. This foundation is necessary for developing a robust theoretical structure and for ensuring that the new study builds upon and contributes to knowledge, rather than duplicating existing work.

152. (A) A sample to the wider population it represents.
Generalization is a fundamental concept in research that refers to the ability to apply findings and conclusions derived from a specific sample back to the wider population it represents. This process is a primary goal of quantitative research, as it allows for broader inferences from a limited number of observations. The validity of this generalization depends on the sample being representative and the research methodology being rigorous. It enables investigators to make claims based on study results.

NODIA

153. (C) Cross-sectional design
A cross-sectional design is a research design that involves collecting data from a sample at a single point in time. This approach provides a snapshot of a particular population or phenomenon, allowing for the analysis of relationships between variables as they exist at that specific moment. It is often used for descriptive research and for identifying patterns within a group. While it cannot show changes over time, it is an efficient way to gather data and generate insights.

154. (A) The consistency and dependability of the measurement.
The concept of reliability in research is primarily concerned with the consistency and dependability of a measurement. A reliable tool or procedure will yield similar results when applied under the same conditions on different occasions. This quality ensures that the data collected is stable and not influenced by random fluctuations or errors. While reliability is essential for the credibility of findings, it must be paired with validity to ensure that the instrument is accurately measuring what intended.

155. (D) It is designed to solve a specific practical problem.
The primary characteristic of applied research is its focus on solving a specific, practical problem

emerges inductively from systematic analysis of collected data through coding, comparison, and interpretation. Patterns and concepts are identified first, and then a theoretical framework is built from them. This makes it a data-driven qualitative research approach rather than literature-driven or experimental.

170. (A) It investigates the social world and human behavior.
A key feature of social research is that it investigates the social world and human behavior using a variety of systematic inquiry methods. It explores how individuals interact within society and how social structures, culture, and institutions influence their lives. By using both qualitative and quantitative approaches, social researchers aim to uncover the patterns and dynamics that govern social life. This broad field provides essential insights for addressing complex social issues and for developing policies that improve well-being.

171. (D) The philosophical underpinnings and evolution of different research paradigms.
The history of scientific thought helps a researcher understand the philosophical underpinnings and the evolution of different research paradigms over time. By studying this history, investigators can appreciate how definitions of knowledge and the scientific method have shifted across eras. This historical perspective provides essential context for current academic practices and allows researchers to critically engage with the assumptions that guide their own work. Understanding the evolution of these ideas is fundamental for a comprehensive perspective on inquiry.

172. (B) Empirical evidence
In scientific research, empirical evidence is the source of knowledge that is most highly emphasized. This approach relies on the systematic collection of data through direct observation and experimentation rather than on intuition, tradition, or authority. By basing conclusions on measurable and testable information, researchers can establish objective facts and contribute to the progress of knowledge in a rigorous and transparent manner. This commitment to evidence is a cornerstone of the scientific method, ensuring that research findings are dependable.

173. (A) P-4, Q-3, R-2, S-1
Simple random sampling gives every population member an equal chance of being selected, while systematic sampling involves selecting every nth element from a list. Stratified sampling divides the population into subgroups before randomly sampling from each. Convenience sampling involves selecting participants who are easily accessible. Understanding these different techniques is essential for choosing the most appropriate method for a study, as each has different implications for representativeness and the ability to generalize final results back to the population.

174. (D) Making the research original and ensuring it contributes new knowledge.
Identifying gap areas in existing literature is crucial for making a new research project original and ensuring it contributes new knowledge to the field. By finding questions that have not been adequately addressed, a researcher can justify the need for their study and demonstrate its significance. This process, which is a primary goal of a literature review, allows for the focused development of research objectives and ensures that final findings will add meaningful and useful insights to the academic community.

175. (A) A directional hypothesis
A directional hypothesis is one that predicts a specific nature or direction of the relationship between variables, such as "higher education leads to greater disaster preparedness." This statement clearly indicates the expected outcome, specifying that an increase in one factor will result in an increase in the other. This clarity is essential for guiding the statistical analysis and providing a focused expectation for research findings. It distinguishes this type from non-directional hypotheses, which only state that relationships exist.

176. (B) It is acceptable to offer large cash payments that could be coercive in a desperate situation.
In disaster research ethics, it is considered incorrect and unethical to offer large cash payments that could be coercive in a desperate situation. While providing some compensation

Click Here to Buy book on Amazon

134. (B) It captures ephemeral data that would otherwise be lost.
Disaster reconnaissance is critical because it allows researchers to capture ephemeral or perishable data that would otherwise be lost shortly after an event. This includes documenting immediate physical damage, such as watermarks or structural failures, as well as the early social responses within the community. By gathering this data rapidly, scientific teams can provide essential evidence for understanding disaster dynamics and improving future risk models. This urgent documentation is a vital part of enhancing resilience and developing effective management strategies.

135. (D) Ensuring research findings align with the views of the funding agency.
Academic integrity encompasses several fundamental principles, including honesty in reporting data, the avoidance of plagiarism, and the fair attribution of authorship to all contributors. It also involves conducting research in a transparent and responsible manner. However, it does not require that findings align with the views of a funding agency. In fact, compromising results to satisfy a sponsor is a violation of core values. Researchers must maintain independence and report findings truthfully to uphold scientific credibility.

136. (A) A computational method
Analyzing large datasets such as tweets sent during a hurricane to understand patterns of information dissemination is a prime example of a computational method in disaster research. These techniques involve using advanced software and algorithms to process and visualize data that is too complex for manual analysis. By using computational tools, researchers can gain real-time insights into public behavior and situational awareness during a crisis, providing valuable information for emergency managers and contributing to a comprehensive understanding.

137. (C) Co-producing knowledge with diverse stakeholders to solve complex societal problems.
A primary goal of transdisciplinary research in a disaster context is to co-produce knowledge by integrating the expertise of diverse academic disciplines with the practical insights of stakeholders such as community members and policymakers. This collaborative approach is essential for addressing the complex, multi-faceted problems that disasters present. By working together, researchers and practitioners can develop more effective, sustainable, and socially relevant solutions that improve community resilience. This method ensures research is both scientifically rigorous and practically applicable.

138. (B) P-4, Q-1, R-3, S-2
Each qualitative approach has a core focus: phenomenology asks about the essence of a lived experience, while ethnography explores the culture of a specific group. Grounded theory seeks to develop a new theory directly from the data, and narrative research focuses on individual stories that people tell about their lives. Matching these approaches with their primary questions is essential for selecting the right methodology to address research goals and for ensuring the logical consistency of inquiry.

NODIA

139. (D) Specifies the direction of the relationship between variables (e.g., more, less, higher, lower).
A directional hypothesis is so named because it specifies the expected direction of the relationship between variables, using terms such as more, less, higher, or lower. For example, it might predict that increased education leads to higher levels of preparedness. This type of hypothesis provides a clear and focused expectation for the study's outcome, which distinguishes it from non-directional hypotheses that only state a relationship exists without predicting its specific nature. This clarity is essential for guidance.

140. (B) Laws describe what happens, while theories explain why it happens.
In scientific research, laws and theories play distinct but related roles. Laws provide descriptive generalizations about how phenomena consistently behave under specific conditions, often represented as mathematical relationships. Theories, however, go further by providing the underlying explanations and mechanisms for why these patterns occur. While a law tells us what happens, a theory explains the logical reasons behind the observations. Together, they form the basis for scientific understanding,

an interview schedule is used by the researcher, who asks the questions verbally and records the participant's responses. While both can contain similar questions, the method of administration significantly influences the interaction between the researcher and the participant, as well as the nature and quality of collection.

184. (A) accuracy; consistency
In the context of research measurement, validity refers to the accuracy and truthfulness of a tool—whether it truly measures what it claims to measure. Reliability, on the other hand, refers to the consistency and dependability of the measurement over time. A valid tool provides authentic results, while a reliable tool provides stable results across different applications. Both concepts are essential for ensuring high-quality research, providing the foundational standards for the credibility and meaningfulness of any scientific investigation's findings and conclusions.

185. (C) A cyclical process of planning, acting, observing, and reflecting
A key feature of action research is its focus on a cyclical process of planning, acting, observing, and reflecting. This methodology is designed to solve practical, immediate problems within a specific context and is often conducted by practitioners themselves. By iterating through these cycles, those involved can improve their own practices and develop direct solutions for local issues. This focus on practical application and continuous improvement distinguishes action research from other approaches that may prioritize universal theories or detached observation.

186. (A) Objectivity and credibility
Avoiding bias is essential in research to ensure the study's objectivity and credibility. Bias can lead to distorted findings and inaccurate conclusions, which undermines the integrity of the research and the trust of the scientific community. By implementing rigorous methodologies and remaining aware of potential personal or systematic prejudices, researchers can produce results that are dependable and accurately represent the phenomena being investigated. Maintaining these high standards is a fundamental part of conducting professional and ethical scientific research projects.

187. (A) a, b, and d
A good research design provides a structured plan that clearly specifies the objectives of the study and details the specific methodology and techniques to be used for data collection and analysis. It serves as a logical roadmap for the entire investigation, ensuring that resources are utilized effectively and that research remains focused. While some flexibility may be necessary, a clear and well-defined plan is essential for minimizing bias and maximizing the reliability and validity of final research findings.

188. (B) Integrating diverse forms of knowledge allows for holistic understanding.
Transdisciplinary research is important in the context of disasters because it integrates diverse forms of knowledge from different academic disciplines and non-academic stakeholders. This collaborative approach allows for a more holistic and comprehensive understanding of complex, multi-faceted problems that single disciplines cannot solve alone. By co-producing knowledge, researchers and practitioners can develop more effective, sustainable, and socially relevant solutions that improve community resilience. This method ensures that disaster management strategies are scientifically sound and practically applicable.

189. (C) Agent-based modeling and simulation
Agent-based modeling and simulation is a primary method used in computational research for disasters. These techniques allow researchers to create virtual environments where they can observe complex interactions between different agents, such as individuals or organizations, during a crisis. By simulating various scenarios, investigators can test the effectiveness of different mitigation and response strategies without real-world risk. These computational tools provide powerful insights into disaster dynamics and are essential for enhancing preparedness and improving resilience in modern urban infrastructure.

190. (D) Rejecting a true null hypothesis.
A Type I error occurs in hypothesis testing when a researcher incorrectly rejects a null hypothesis that is actually true. This is often referred to as a false positive result, where the study concludes that a relationship or effect exists when it does

Downloaded from www.pdf.tube

not in reality. The risk of this error is typically measured by the significance level, or alpha. Minimizing Type I errors is essential for ensuring the reliability of findings and for preventing the dissemination of inaccurate scientific information.

191. (A) Research objectives and questions.
The construction of a research questionnaire should be guided primarily by the specific research objectives and questions of the study. This ensures that every question included is relevant and will contribute the necessary data to address the core focus of the investigation. By aligning the instrument with research goals, the investigator can gather high-quality information that effectively supports final analysis and interpretation. A well-designed, objective-driven questionnaire is essential for the accuracy, validity, and overall success of any project.

192. (B) Post-positivism - Reality can only be known imperfectly and probabilistically.
Each research paradigm has core beliefs about the nature of reality and knowledge. Positivism holds that there is a single objective reality, while constructivism suggests that reality is socially constructed. Post-positivism represents a middle ground, believing that an objective reality exists but that it can only be known imperfectly and probabilistically due to human limitations and bias. Understanding these distinctions is fundamental for researchers, as their chosen paradigm shapes every aspect of inquiry, from problem formulation to the final interpretation.

193. (B) Voluntary and based on a clear understanding of the research
The primary ethical issue in research involving informed consent is ensuring that participation is entirely voluntary and based on a clear and comprehensive understanding of the study's details. This includes being informed about the purpose of research, the procedures involved, and any potential risks or benefits. By providing this information, researchers respect the autonomy of participants and ensure they can make an informed decision without pressure. This process is essential for upholding the fundamental ethical standards of academic scientific inquiry.

194. (A) A mixed-methods approach
A study that combines the statistical analysis of quantitative household surveys with in-depth qualitative interviews is a prime example of a mixed-methods research approach. This strategy allows the investigator to leverage the respective strengths of both methodologies, providing a comprehensive and synergistic understanding of complex phenomena. By triangulating findings, researchers can gain both the statistical breadth of patterns and the qualitative depth of personal experiences, leading to more robust, credible, and nuanced conclusions that can effectively inform policy.

195. (C) Descriptive research
Descriptive research is a type of study that aims to systematically describe the characteristics of a population, situation, or phenomenon. It focuses on answering the what, where, and when questions rather than the why. This approach often involves the use of surveys, observations, or case studies to gather data and identify patterns. By providing an accurate and detailed account of the subject under investigation, descriptive research serves as a vital foundation for more complex exploratory or experimental scientific studies.

NODIA

196. (A) Both A and R are true and R is the correct explanation of A.
Ethical guidelines in disaster research are particularly complex because investigators must constantly balance the scientific need for data with the immediate humanitarian needs and psychological state of a vulnerable population. Survivors of disasters are often in significant distress, which can complicate the process of obtaining truly informed and voluntary consent. Researchers have a fundamental obligation to do no harm and must prioritize participant well-being above the goals of study. Ethical oversight is essential for ensuring respectful and responsible research.

197. (C) Narrative and life history research
The term autobiography as a research method falls under the broader category of narrative and life history research. This qualitative approach focuses on collecting and analyzing the personal stories and lived experiences of individuals to gain deep insights into subjective realities. By exploring these first-person accounts, researchers

can understand how people make sense of their lives and the social and historical contexts in which they live. This method provides a rich perspective that highlights personal dimensions of diverse social and psychological phenomena.

198. (B) By carefully tracking all sources and citing them properly whenever ideas or words are used.
The best way for a researcher to prevent plagiarism is to carefully track all sources during the entire research process and provide proper citations whenever ideas, words, or creative works of others are used. This includes citing direct quotes as well as paraphrased information. Adhering to these high standards of intellectual honesty is essential for maintaining academic integrity and for ensuring that individuals receive fair credit for contributions. Proper citation also allows others to build upon the existing research.

199. (D) The broad plan spanning from assumptions to data collection and analysis.
A research approach refers to the broad plan and strategy for an entire study, spanning from fundamental philosophical assumptions to the specific methods used for data collection and analysis. It provides the overall framework that guides the investigator in answering research questions and achieving objectives. Choosing the right approach, whether qualitative, quantitative, or mixed-methods, is essential for ensuring the study is rigorous and appropriate for the topic. This overarching plan ensures that all aspects of research are logically connected.

200. (A) Social research aims to understand social phenomena, while applied research aims to solve a practical problem, though they can overlap.
A key distinction between social research and applied research lies in their primary goals. Social research aims to understand and explain social phenomena and human behavior, often contributing to fundamental knowledge and theory. Applied research is specifically designed to solve a practical, real-world problem and produce findings that lead to direct action or policy recommendations. While these two types can overlap, particularly in fields like disaster management, their initial motivation remains a fundamental and distinct point of difference.

201. (D) a, b, c, d, and e
The study of natural and environmental disasters is inherently multidisciplinary, incorporating research from diverse fields such as seismology, hydrology, sociology, and epidemiology. Seismology and hydrology provide critical physical data on earthquake and flood hazards, while sociological surveys explore human dimensions of vulnerability and response. Epidemiological studies track health impacts in the aftermath of events. This integrated approach is essential for a comprehensive understanding of disasters, as it addresses both the physical processes and the complex social realities of catastrophes.

202. (A) It provides a more complete and synergistic understanding of a complex phenomenon.
The main advantage of using a mixed-methods approach in disaster research is that it provides a more complete and synergistic understanding of complex phenomena. By strategically combining qualitative and quantitative data, researchers can capture both the statistical extent of a disaster's impact and the in-depth personal experiences of those affected. This triangulation of findings allows for a more robust and nuanced analysis, where the strengths of one method offset the limitations of the other. This holistic perspective informs policy.

203. (D) A framework of philosophical assumptions that shapes the inquiry process.
In research, a paradigm refers to a comprehensive framework of philosophical assumptions that shapes the entire inquiry process. It encompasses fundamental beliefs about the nature of reality (ontology) and the nature of knowledge (epistemology), which influence how researchers define problems and select methodologies. Common paradigms include positivism, interpretivism, and pragmatism. Understanding these guiding frameworks is essential for researchers, as their chosen paradigm provides the logical foundation for their work and influences the final interpretation of results.

204. (A) III, II, IV, I
The research process follows a logical and chronological order to ensure a systematic and rigorous investigation. It begins with a thorough literature review to understand existing knowledge and identify gaps. This is followed

Click Here to Buy book on Amazon

by the development of a research design, which serves as the blueprint for the entire project. Once the design is set, the researcher proceeds to data collection in the field. The final stage involves hypothesis testing and data analysis to draw conclusions and answer research questions effectively.

205. (C) Protecting the rights and welfare of research participants.
Ethical guidelines in research are primarily important for protecting the fundamental rights and welfare of participants. These standards ensure that participation is voluntary and informed, and that individuals are treated with dignity and respect throughout the entire process. By adhering to principles such as do no harm and maintaining confidentiality, researchers can build trust and ensure that their work is conducted responsibly. These guidelines are essential for upholding scientific integrity and for protecting vulnerable populations in any field.

206. (D) Develop theory inductively from data.
Grounded theory is a qualitative methodology that seeks to develop a new theory inductively through the systematic gathering and analysis of real-world data. Unlike other approaches that test pre-existing theoretical frameworks, grounded theory begins with a clean slate, allowing the theory to emerge directly from the participants' experiences and social processes. This approach is useful for exploring complex phenomena and for generating new insights in areas where traditional theories are insufficient, ensuring resulting theory is grounded in evidence.

207. (A) A detailed timeline and schedule of activities.
A detailed timeline and schedule of activities are key components of a comprehensive research plan. This schedule outlines the specific stages of the project, from initial literature review to final report writing, ensuring that the study remains organized and that resources are managed effectively. By establishing clear milestones and deadlines, the researcher can stay focused on objectives and anticipate logistical challenges. A realistic timeline is essential for successful completion of any high-quality research project within its intended timeframe.

208. (B) Research must always prove the initial hypothesis.
It is an incorrect and common misconception that research must always prove its initial hypothesis. In reality, research is a systematic process of inquiry where the investigator remains objective and open to all findings, whether or not they support original assumptions. Failing to find a predicted relationship is a natural and important part of the scientific method, contributing to knowledge by refining theories and identifying new directions. Researchers must report all results truthfully and accurately to maintain scientific integrity.

NODIA

209. (B) Understanding perceptions and capacities to design appropriate interventions.
Qualitative approaches to risk reduction focus primarily on understanding local perceptions, cultural beliefs, and community capacities to design appropriate and effective interventions. By using methods such as interviews and focus groups, researchers can identify social and human factors that influence how people recognize and respond to hazards. This deep understanding is essential for creating risk reduction programs that are culturally sensitive, community-driven, and sustainable. It complements quantitative models by addressing the subjective realities of those affected by disasters.

210. (A) "There is a difference between Method A and Method B."
A non-directional hypothesis is stated in a way that predicts a difference or relationship exists between variables, but it does not specify the nature or direction of that difference. For example, stating that "there is a difference between Method A and Method B" is non-directional because it does not predict which method is better or worse. This type of hypothesis is used when the researcher has no prior expectation about the direction, providing a basis for initial analysis.

211. (B) To act as the foundation and structure upon which the research is built.
A theoretical framework acts as the foundation and conceptual structure upon which a research study is built. It identifies and describes the specific theories and concepts from existing literature that will guide investigation and help interpret findings. This framework provides

a logical basis for hypotheses and ensures research is situated within the broader context of academic knowledge. By providing this structure, the theoretical framework helps to explain connections between variables and ensures a coherent and scientifically sound investigation.

212. (D) The list of all elements in the population from which the sample is drawn.
In the context of sampling, the sampling frame is the physical or logical list of all elements or individuals in the population from which the sample will be drawn. This could be a student registry, a telephone directory, or a database of households. Having an accurate and complete sampling frame is essential for ensuring that every member of the population has an equal or known chance of selection. This is a critical step for obtaining a representative sample.

213. (C) Geographical methods for disaster research
The use of spatial technologies such as GPS, remote sensing, and GIS for mapping and analyzing disaster impacts are central to geographical methods for disaster research. These tools allow researchers to visualize and evaluate the spatial distribution of hazards, vulnerability, and damage systematically. By identifying where high-risk areas overlap with critical infrastructure and vulnerable populations, these methods provide essential data for effective mitigation and emergency planning. This spatial perspective is crucial for a comprehensive and data-driven understanding of modern disasters.

214. (B) Interpretation and reporting of findings
The final step in the research process is typically the interpretation and reporting of the study's findings. During this phase, the researcher assigns meaning to the analyzed data, connecting results back to the original research questions and the broader theoretical framework. The investigator then writes a comprehensive report or thesis that documents the entire project, including the methodology, results, and conclusions. This step is essential for sharing knowledge with the community and for ensuring research contributes to practice.

215. (D) Treating the community as an equitable partner rather than a subject.
The most critical feature of Community-Based Participatory Research is its commitment to treating the community as an equitable partner throughout all phases of the research process. Rather than being passive subjects, community members are active participants who contribute their contextual knowledge to the investigation. This collaborative approach ensures that research addresses problems relevant to needs and fosters local ownership of outcomes. This partnership between researchers and residents leads to more effective, sustainable, and socially just disaster management outcomes.

216. (A) How do survivors make sense of their loss and begin to rebuild their lives?
A qualitative research question in a disaster context typically focuses on exploring personal meanings, lived experiences, and complex social processes. For example, asking "How do survivors make sense of their loss and begin to rebuild their lives?" is a classic qualitative inquiry. It seeks to understand the "how" and "why" from the participants' perspective, rather than focusing on numerical measurements. This approach provides descriptive insights into human and psychological dimensions of recovery vital for effective support.

NODIA

217. (A) Both A and R are true and R is the correct explanation of A.
A research design is an essential component of any study because it provides a structured and logical plan that guides the entire process of data collection and analysis. It serves as the blueprint for answering research questions effectively while minimizing potential bias and maximizing reliability of findings. By establishing this roadmap early on, the investigator can ensure that resources are used efficiently and that the study remains focused on objectives. A clear design is fundamental for credibility.

218. (A) Semi-structured or unstructured interview
An interview guide is most likely to be used during a semi-structured or unstructured interview. It provides a flexible framework of key topics and themes that the researcher intends to cover, without imposing a rigid script. This allows the conversation to flow naturally and gives the participant the freedom to share unique perspectives and experiences. This approach

approaches require different methods for data collection and analysis. The choice of approach dictates how variables are defined, how subjects are selected, and how the researcher answers questions.

264. (D) experimental designs focus on manipulating variables, while sample designs focus on selecting units.
Scientific studies utilize various types of designs to achieve different objectives. Experimental designs are primarily focused on the manipulation of variables to observe specific effects and establish causal relationships. In contrast, sample designs focus on the methods used to select subjects or units from a larger population. Both are essential components of a research plan, ensuring that findings are valid.

265. (A) connect conceptual problems to empirical research.
Research design serves as the blueprint for any scientific investigation, facilitating the transition from abstract ideas to concrete findings. Its main purpose is to connect conceptual research problems to pertinent empirical research. By establishing this link, the design ensures that the data collected is directly relevant to the questions being asked, allowing the researcher to draw valid and reliable conclusions.

266. (B) The research question and design of the study.
The selection of specific methods or tools for gathering data is never an arbitrary decision in scientific research. Instead, it is primarily dictated by the research question, the overall design of the study, and the nature of the variables under investigation. This alignment ensures that the tools used are appropriate for the information needed, ultimately leading to more accurate findings.

267. (B) An interview schedule is more structured and rigid than an interview guide.
Tools for conducting interviews vary in their level of structure and flexibility. An interview schedule is a highly structured instrument that lists exact questions to be asked in a specific order, ensuring consistency across all respondents. Conversely, an interview guide is used for semi-structured or unstructured interviews, providing broad topics or open-ended questions that allow for more probing.

268. (A) ensuring the language is clear and the flow is logical.
Developing an effective questionnaire requires meticulous attention to detail to ensure it yields high-quality data. The instrument must be designed with clear, unambiguous language to avoid confusion among respondents. Furthermore, the questions should follow a logical flow that makes sense to the participant. Proper construction is essential for ensuring that the tool is both valid and reliable.

269. (C) a questionnaire with closed-ended questions.
Researchers seeking quantitative data typically utilize tools that produce numerical results suitable for statistical analysis. A questionnaire featuring closed-ended questions is an ideal choice for this purpose, as it provides respondents with fixed options. This structured approach allows for efficient collection of standardized data across many participants, facilitating the identification of patterns, trends, and correlations within the population.

270. (D) gather high-quality data for meaningful analysis.
The careful development and construction of data collection instruments are fundamental to the success of any research project. The overarching goal is to gather high-quality data that can be meaningfully analyzed to address the research problem. By ensuring that tools like questionnaires or interview guides are reliable and valid, researchers can produce evidence capable of supporting sound conclusions.

271. (C) To estimate the characteristics of a population by studying a subset.
Sampling is a vital technique in research that involves selecting a specific subset of individuals from a larger statistical population. The primary purpose of this process is to estimate the characteristics of the whole population without needing to study every member. This approach allows researchers to draw valid inferences about large groups while managing time, costs, and logistical constraints.

272. (B) rejecting a true null hypothesis.

Downloaded from www.pdf.tube

226. (A) It involves expressing risk in numerical terms, like probabilities and expected losses.
A quantitative approach to risk assessment involves expressing risk in clear numerical terms, such as probabilities of occurrence and expected financial or physical losses. This method relies on statistical models and large datasets to evaluate potential hazards in an objective manner. By quantifying risk, researchers provide a measurable basis for comparing threats and for helping policymakers prioritize mitigation efforts and allocate resources effectively. It provides a precise and data-driven perspective essential for comprehensive and economical disaster management strategies.

227. (B) Common-sense methods people use to make sense of their situation during a disaster.
In the context of disaster research, ethnomethodology is concerned with the common-sense methods and everyday reasoning that people use to make sense of their situation during a crisis. It investigates how individuals coordinate activities and maintain social order in high-stress and unpredictable environments. By focusing on these micro-level processes of interaction, ethnomethodologists can uncover the foundational ways in which social reality is produced. This approach provides deep insights into the internal dynamics and resilient behaviors of communities.

228. (D) A textbook chapter summarizing the findings of multiple studies.
A primary source of knowledge in research provides original data or first-hand accounts, such as an original research article, a historical document, or an interview with an eyewitness. A textbook chapter, however, is a secondary source because it summarizes and interprets the findings of multiple primary studies. While textbooks are valuable for providing an overview, researchers should prioritize primary sources for original inquiry. This ensures that work is based on the most direct and unmediated information available for scientific study.

229. (A) a, b, and c
Valid ethical guidelines for research include obtaining informed consent to ensure voluntary participation, protecting participant privacy, and avoiding the fabrication or falsification of any data. These principles are fundamental for upholding the dignity and rights of those involved and for maintaining the integrity of the scientific community. Researchers must never ignore potential harm, as the principle of do no harm is paramount. Ethical oversight is required throughout the entire process to ensure professional and responsible academic conduct.

230. (B) Phenomenology
A study that seeks to understand the lived experience of being a first responder during a major incident is using the qualitative approach of phenomenology. This method focuses on exploring the essence of individuals' experiences to understand how they describe and make sense of their world. By capturing deep, personal perspectives, the researcher can provide a rich account of the emotional and psychological dimensions of high-stakes work. This approach highlights subjective reality, providing a comprehensive understanding of human impact.

231. (D) Oriented towards solving a specific, practical problem.
The main characteristic of applied research is that it is oriented toward solving a specific, practical problem in the real world. Unlike pure research, which aims to expand fundamental knowledge, applied research is motivated by the need for concrete solutions that can lead to direct action or policy recommendations. In fields like disaster management, this might involve investigating the effectiveness of specific mitigation strategies to provide improvements for community safety, ensuring that research results have a beneficial social impact.

232. (A) To provide a systematic and coherent guide for executing the research project.
The purpose of developing a research plan is to provide a systematic and coherent guide for executing the entire project from start to finish. This plan outlines study objectives, methodology, data collection techniques, and analysis strategies, ensuring investigation is organized and remains focused. By establishing this roadmap, the researcher can manage resources effectively, anticipate potential logistical challenges, and maintain scientific rigor. A clear research plan is essential for the successful completion of any high-quality and professional academic inquiry.

NODIA

233. (C) Failing to reject a null hypothesis that is actually false.
In hypothesis testing, a Type II error occurs when a researcher fails to reject a null hypothesis that is actually false. This is also known as a false negative result, where the study concludes that no effect exists when one is present in reality. This error can occur due to a small sample size or an insensitive measurement tool. Minimizing Type II errors is important for ensuring that real and potentially significant findings are not missed, maintaining reliability.

234. (A) Ensuring that the research does not interfere with life-saving relief efforts.
A key ethical challenge in disaster research is ensuring that the study does not interfere with life-saving relief and recovery efforts. Researchers must balance their scientific goals with the immediate humanitarian needs of a vulnerable and often traumatized population. This requires investigators to be sensitive, flexible, and deeply committed to the principle of do no harm. By coordinating with local authorities, researchers can conduct work in a way that is respectful and responsible, minimizing footprint while gathering essential data.

235. (D) Its truthfulness and accuracy.
The validity of a research finding refers to its truthfulness and accuracy—the extent to which the study truly measures what it intends to measure and represents real-world phenomena accurately. High validity ensures that results are authentic and that conclusions drawn are credible and meaningful. While reliability focuses on consistency over time, validity is about the core integrity of the data. Maintaining high validity is essential for the overall quality and trustworthiness of any scientific investigation's contributions to knowledge.

236. (B) a, b, c, and e
Actions such as submitting someone else's work, copying text without citation, and paraphrasing without giving proper credit all constitute plagiarism. Additionally, citing a source you did not actually read is a form of research misconduct. These actions undermine the fundamental principles of academic integrity, based on honesty, trust, and fair attribution of intellectual contributions. Researchers must ensure all sources are accurately acknowledged to maintain professional ethics and to uphold the credibility and transparency of the entire scientific community.

237. (C) Potential to contribute to knowledge or practice.
The significance of a research problem refers to its potential to contribute new and meaningful knowledge to a field or to provide practical solutions for real-world issues. A significant problem is one that addresses a clear gap in existing understanding or a pressing social or physical challenge. Evaluating significance is a key part of the research design process, as it ensures that the investigator's efforts will result in findings that are relevant and useful to the broader community and society.

238. (A) Both A and R are true and R is the correct explanation of A.
A literature review is a foundational step in the research process because it allows the investigator to understand existing knowledge, identify significant gaps, and position their own study within the field. By reviewing previous work, the researcher can avoid duplicating efforts and can demonstrate how their new inquiry will contribute to the broader body of academic understanding. This process is essential for justifying research objectives and for ensuring that studies are built upon solid theoretical and empirical foundations.

239. (A) Stories and personal accounts.
Narrative research is a qualitative method that primarily analyzes stories and personal accounts to gain insights into how people make sense of their lives and experiences. By exploring individual narratives, researchers can understand the subjective reality and personal perspectives of participants in social and historical contexts. This method provides a rich, descriptive dimension to research, highlighting human aspects through the study of first-person stories, biographies, and life histories, which offer unique and detailed qualitative data to investigators.

240. (B) Quantitative research
The principle of generalization is most strongly associated with quantitative research. This approach aims to apply findings derived from

Click Here to Buy book on Amazon

a specific sample to the broader population it represents. To achieve this, quantitative researchers use standardized tools and representative samples to gather numerical data that can be analyzed using statistical techniques. The ability to generalize findings is essential for making wider claims about large groups and for contributing to the development of broadly applicable theories and policies in academic disciplines.

241. (B) The community members are active partners in the research process.
The defining feature of participatory research is the active involvement of community members as equitable partners throughout the entire research process. Unlike traditional methods where people are passive subjects, participatory inquiry values the contextual knowledge and lived experiences of participants. This collaboration between researchers and community residents ensures that the investigation is relevant to needs and fosters local ownership of outcomes. This approach leads to more sustainable, effective, and socially just solutions for complex real-world problems and community challenges.

242. (A) The mental health impacts on survivors and responders.
In Health Emergency and Disaster Risk Management, research may investigate the significant mental health impacts of disasters on both survivors and responders. This field focuses on how healthcare systems and public health networks can better support the psychological well-being of affected populations during and after a crisis. By focusing on these health-related outcomes, Health-EDRM contributes to the development of more resilient medical systems and effective support services that protect lives and maintain essential health and social services in catastrophes.

243. (C) Coding
Coding is the systematic process of assigning numerals or symbols to research answers so that they can be categorized and analyzed effectively. This step occurs during the data processing phase, after data collection but before final analysis. By categorizing responses in this way, the researcher transforms qualitative or raw information into a structured, manageable format suitable for computer entry and statistical testing. Effective coding is essential for ensuring accuracy and organization of the data, fundamental for reliable and credible results.

NODIA

244. (D) Informed consent
Informed consent is the process used in research to ensure that participation is entirely voluntary and based on a clear understanding of the study's purpose, procedures, risks, and benefits. It is a fundamental ethical principle that respects the autonomy of participants. By providing this information and obtaining agreement before the study begins, researchers uphold the highest ethical standards and protect individuals from potential harm or coercion. This process is a cornerstone of responsible research, ensuring that rights and dignity are respected.

245. (C) Hypothetical research
Standard categories of academic research include applied research, which focuses on practical problems; action research, which involves iterative cycles of improvement; and participatory research, which involves community partners. These categories are defined by their specific methodologies and goals. However, hypothetical research is not a recognized category in standard research methodology. While researchers formulate hypotheses, the term itself does not represent a distinct approach or framework for conducting a systematic scientific investigation in the same way the other categories do.

246. (B) Using machine learning to analyze social media data for situational awareness.
Computational methods for disaster research may include using machine learning algorithms to analyze large amounts of social media data for real-time situational awareness during a crisis. These techniques allow researchers to process complex information quickly and identify patterns that are not visible through manual analysis. By using advanced software and computational models, investigators can gain insights into public behavior and needs, providing essential information for emergency managers and contributing to a data-driven understanding of modern disaster dynamics and response.

is highly valued in qualitative research for its ability to gather deep, detailed information while ensuring the conversation remains focused on core objectives.

219. (D) A model or framework of assumptions that guides inquiry.
In the context of research, a paradigm refers to a comprehensive model or framework of philosophical assumptions that guides the entire inquiry process. It consists of fundamental beliefs about the nature of reality and knowledge, which influence how researchers define problems and select appropriate methodologies. Common paradigms include positivism, constructivism, and post-positivism. By providing this guiding structure, a paradigm ensures that the investigation is conducted consistently and transparently, shaping every stage from problem formulation to data interpretation.

220. (B) Validity and Reliability
Validity and reliability are often referred to as the twin pillars of measurement quality in research. Validity concerns the accuracy and truthfulness of a tool—whether it truly measures what it claims to measure. Reliability refers to the consistency and dependability of the measurement over time. High-quality research requires that instruments meet both standards to ensure data collected is authentic and stable. These concepts provide the foundational basis for the credibility, meaningfulness, and overall quality of any scientific investigation.

221. (B) P-3, Q-1, R-4, S-2
In a study on disaster awareness workshops, the number of workshops provided is the independent variable, as it is the factor being manipulated. The level of community preparedness is the dependent variable, representing the outcome being measured. The control group consists of a community that receives no workshops, providing a baseline for comparison. A Type II error would occur if the study failed to find a real effect of the workshops. Understanding these roles is essential for experimental design.

222. (D) An unanswered question or an area needing more research.
Identifying a gap in the literature means finding an unanswered question or a specific area that needs more research within a field of study. This is a primary goal of a literature review, as it allows the researcher to justify the need for their own work and ensures that the study will contribute new knowledge. By addressing these missing pieces, an investigator can make their work more significant and demonstrate its relevance to scholarly understanding and practical challenges.

223. (A) To capture and document ephemeral data immediately after a disaster.
The primary purpose of disaster reconnaissance is to capture and document ephemeral or perishable data in the immediate aftermath of a disaster event. This specialized research activity focuses on gathering information that would otherwise be lost, such as initial physical damage or early social responses. By documenting these impacts quickly, scientific teams provide essential evidence for understanding disaster dynamics and for improving future risk models and mitigation strategies. This rapid documentation is vital for enhancing community resilience.

224. (D) Anonymity means the researcher does not know the identity; confidentiality means they will not disclose it.
In research ethics, anonymity means that even the researcher cannot link specific responses back to the identity of a participant. Confidentiality, however, means that while the researcher may know the participant's identity, they have a professional obligation not to disclose it and to keep all personal information private. Both concepts are essential for protecting participant privacy and dignity, but they represent different levels of security. Understanding this distinction is crucial for maintaining ethical standards and building participant trust.

225. (B) Qualitative, in-depth inquiry.
A case study design is a form of qualitative, in-depth inquiry that involves a detailed investigation of a single unit, such as an individual, a community, or a specific disaster event. This approach allows the researcher to explore complex issues within their real-life context using multiple sources of evidence. Unlike large-scale quantitative surveys, case studies provide comprehensive and rich insights into the unique aspects of the subject under study. This method is valued for providing detailed and nuanced understanding.

Downloaded from www.pdf.tube

a deeper and more objective understanding of complex natural and social phenomena.

255. (C) reflective and progressive problem-solving process involving teams.
Action research is defined as a reflective process of progressive problem-solving. It is typically led by individuals working collaboratively in teams to improve their specific professional or social practices. By focusing on practical issues and iterative improvement, this approach allows practitioners to address immediate challenges while contributing to broader knowledge through systematic investigation and collective reflection within their environments.

256. (B) Pinpointing gap areas for new research.
A comprehensive literature review serves as the bedrock for any rigorous research project by examining the existing body of knowledge. Beyond simple summarization, its most critical function is to pinpoint gap areas that have not been adequately addressed. Identifying these voids allows researchers to justify the necessity for new studies and ensures that their work contributes unique insights.

257. (D) specifies the expected direction of a relationship between variables.
Hypotheses are tentative statements regarding the relationship between variables, and they can take various forms based on the researcher's expectations. A directional hypothesis specifically predicts the expected nature or direction of this relationship. By clearly stating how one variable is expected to influence another, this type of hypothesis provides a focused and testable prediction that guides subsequent data analysis.

258. (A) Research Problem → Literature Review → Hypothesis
The initiation of rigorous research typically follows a logical sequence to ensure clarity and depth. It begins with the formulation of a research problem, which is then refined through a comprehensive literature review. This review provides the necessary context to identify knowledge gaps, eventually leading to the development of a testable hypothesis. This structured progression ensures the study remains focused.

NODIA

259. (C) To provide focus and guidance for the research process.
A well-developed working hypothesis serves as a vital tool during the investigation process. It provides a clear focus that directs the researcher through the complex phases of data collection and analysis. By proposing a specific relationship between variables, it acts as a guide, ensuring that the study remains targeted on its core objectives and allowing for empirical validation or refutation.

260. (A) evaluating and synthesizing the literature.
A critical literature review involves more than just listing or summarizing previously published works. It requires a systematic evaluation and synthesis of existing literature to build a coherent argument for new research. This process involves analyzing theories and findings to understand how they relate to the current study, thereby establishing a strong justification for the investigation and ensuring its relevance.

261. (D) To provide a structured framework and prevent haphazard data collection.
Research design acts as the essential architecture of a scientific study, connecting conceptual problems to empirical investigation. Its primary purpose is to provide a structured framework that guides the entire process. Without this systematic plan, data collection can become haphazard and unfocused. A well-constructed design ensures that evidence gathered is relevant and sufficient to answer the initial research questions accurately.

262. (B) Rigidity
Effective research designs are characterized by several key features that enhance quality of study. These include clarity, efficiency, and ability to minimize bias while maximizing reliability. While the plan must be structured, it should also maintain flexibility to adapt to unforeseen challenges. Rigidity is not a desirable trait, as it can hinder the researcher's ability to respond to various complexities.

263. (C) the development of the research design.
The overarching research approach, whether quantitative, qualitative, or mixed-methods, plays a significant role in shaping the entire investigation. It heavily influences the development of the research design, as different

247. (D) A hypothesis is a tentative answer to the research problem.
The relationship between a research problem and a hypothesis is fundamental: a research problem is an inquiry that sets the direction of study, while a hypothesis is a tentative answer to that problem. The hypothesis provides a testable statement that guides the collection and analysis of data to see if the proposed answer is supported by evidence. This logical connection ensures that the investigation remains focused and that the researcher can systematically evaluate ideas and contribute new knowledge to their academic field.

248. (A) A social research study.
Studying how a community recovers its social routines and structures after a hurricane is a prime topic for a social research study. This type of inquiry investigates the human dimensions of disaster recovery, focusing on how individuals interact and how social systems function in the aftermath of an event. By using a variety of systematic qualitative and quantitative methods, social researchers can uncover the patterns of resilience and the social processes that contribute to the long-term well-being of communities.

249. (C) Assuming relationships that do not exist.
The identifying incorrect pair question type itself reflects a common potential pitfall in research: the danger of assuming relationships between variables or concepts that do not actually exist in reality. Researchers must be rigorous and objective to avoid such miscategorizations and to ensure that conclusions are based on authentic evidence rather than false associations. Maintaining high standards of logical consistency and terminological precision is essential for the accuracy, validity, and overall credibility of scientific inquiry and knowledge advancement.

250. (A) Produce evidence that contributes to reducing disaster risk and improving outcomes for affected people.
The ultimate goal of research in disaster management is to produce high-quality evidence that directly contributes to reducing disaster risk and improving outcomes for people affected by catastrophic events. This involves investigating both physical hazards and social vulnerabilities that contribute to disasters. By developing evidence-based strategies and policies, researchers can help communities build resilience and better prepare for, respond to, and recover from future crises. This practical application of research ensures that scientific inquiry has a tangible and beneficial impact.

251. (B) Its grounding in a specific theoretical framework.
Systematic inquiry defines research as more than simply collecting data. It must be organized and conducted within a specific theoretical framework that guides the entire investigation. This theoretical grounding ensures that the facts discovered or interpreted are part of a larger conceptual structure, elevating the process from basic information gathering to a rigorous scientific pursuit of knowledge.

252. (A) fundamental frame of reference for organising observations.
Research paradigms function as fundamental models or frames of reference used to organize observations and reasoning. They dictate the legitimacy of certain questions and determine the methods utilized for answering them. By providing a structured lens through which scientists view the world, these paradigms ensure that investigations are conducted within a coherent and recognized intellectual framework.

253. (C) Participatory research
Participatory research prioritizes active involvement from the community or stakeholders throughout the entire investigation process. Unlike traditional research methods, this collaborative approach seeks to ensure that the study is relevant to those it affects. By empowering participants to contribute directly to the research, it fosters a sense of ownership and ensures that findings lead to meaningful community-driven outcomes.

254. (D) methods that are more empirical and logical.
The acquisition of knowledge has undergone a significant transformation throughout history, moving away from traditional reliance on intuition and authority. Modern scientific thought now emphasizes more empirical and logical methods. This evolution reflects a growing commitment to systematic observation and evidence-based reasoning, which are essential for developing

Click Here to Buy book on Amazon

Hypothesis testing involves using statistical methods to determine if the data supports a specific proposition. During this process, researchers must be careful to avoid errors that can invalidate their findings. A Type I error specifically occurs when a researcher rejects a null hypothesis that is actually true. Understanding this risk is crucial for ensuring the accuracy and reliability of statistical interpretations.

273. (D) Sampling → Data Processing → Data Analysis
The phases of a research project following data collection follow a logical and sequential order to ensure the integrity of the results. The process begins with sampling, which involves selecting a subset of the population. This is followed by data processing, where raw information is edited and coded. Finally, data analysis is performed to inspect and transform the data.

274. (A) Editing, coding, and entering data for analysis.
Before data can be analyzed to find meaningful patterns, it must undergo a rigorous processing phase. This involves several critical activities, including editing to ensure accuracy, coding to categorize responses, and entering the information into a computing system. These steps transform raw data into a clean and structured format that is ready for statistical testing and deeper analysis to support findings.

275. (C) discussing the implications of the results in a broader context.
The final stage of the research process involves interpreting the analyzed data to draw broader conclusions. This interpretation is more than just a restatement of statistical findings; it requires a detailed discussion of the implications of the results within the context of the research problem and existing theories. By making generalizations, researchers can explain the overall significance of their work.

276. (A) fully aware of the research details before voluntarily agreeing to join.
Ethical research is built upon the foundational principle of informed consent, which ensures the protection of all participants. This mandate requires that individuals are fully informed about the study's purpose, procedures, potential risks, and benefits before they voluntarily agree to participate. By providing this information, researchers respect participant autonomy and ensure that involvement is based on a clear understanding.

277. (D) giving proper credit for the work and ideas of others.
Academic integrity is a cornerstone of the scientific process, requiring researchers to conduct their work with honesty and transparency. A major part of this responsibility involves the prevention of plagiarism. Researchers must give proper credit to the work and ideas of others by using appropriate citations. This practice ensures that intellectual contributions are acknowledged and that community integrity is maintained.

278. (B) Protecting the confidentiality and anonymity of individuals.
Protecting the privacy of individuals who participate in research is a fundamental ethical obligation. Researchers have a strict responsibility to maintain the confidentiality and anonymity of participants' data. This means ensuring that personal information is not disclosed without explicit permission. Adhering to these privacy standards is essential for building trust with participants and upholding the dignity of those involved.

279. (C) maintaining the objectivity of the research study.
Identifying and avoiding various forms of bias is critical for any researcher committed to ethical standards. Personal, cultural, or methodological biases can skew the collection, analysis, and interpretation of data, leading to inaccurate results. By being vigilant against these influences, researchers can maintain study objectivity. This ensures that findings are a true reflection of phenomena rather than preconceived notions.

280. (D) To protect participants and maintain trust in the scientific process.
Adhering to ethical considerations in research is not just a procedural requirement but a fundamental responsibility. The overarching purpose is to protect the well-being of participants and maintain public trust in the scientific process. By following ethical guidelines regarding consent, privacy, and integrity, researchers respect individual rights while ensuring that the

Downloaded from www.pdf.tube

(B) Conducting regular audits of partner organizations.
(C) Establishing clear procurement guidelines for emergency supplies.
(D) Distributing cash without a proper beneficiary identification and verification process.

40. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : State Disaster Management Plans (SDMPs) must be consistent with the National Disaster Management Plan.
Reason (R) : The Disaster Management Act, 2005 provides for an integrated disaster management framework where plans at different levels are in harmony.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

41. What is the primary role of a Disaster Financial Management Team?
(A) To lead search and rescue missions.
(B) To provide medical aid to the injured.
(C) To manage the financial aspects of disaster prevention, response, and recovery.
(D) To conduct scientific research on disaster phenomena.

42. Which of the following legal instruments deals specifically with regulating industrial hazards to prevent chemical disasters?
(A) The Environment (Protection) Act, 1986 and its rules
(B) The Disaster Management Act, 2005
(C) The Indian Penal Code, 1860
(D) The Information Technology Act, 2000

43. Which of the following statements about the role of District Disaster Management Authority (DDMA) is correct?
(A) It is primarily responsible for formulating national-level disaster policies.
(B) Its sole function is to command the State Disaster Response Force (SDRF).
(C) It is responsible for negotiating international aid for disaster relief.
(D) It acts as the district-level planning and implementing body for disaster management.

44. Which Sustainable Development Goal (SDG) explicitly mentions targets related to reducing the impact of disasters?
(A) SDG 4: Quality Education
(B) SDG 11: Sustainable Cities and Communities
(C) SDG 5: Gender Equality
(D) SDG 16: Peace, Justice and Strong Institutions

45. The process of requesting and receiving financial assistance from national or international disaster financial assistance programs typically requires which of the following?
(A) An informal request from the local community leader.
(B) A media report highlighting the severity of the disaster.
(C) A detailed assessment of damages and a formal application process.
(D) A political resolution passed by the local council.

46. Which international conference adopted the "Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters"?
(A) The World Conference on Natural Disaster Reduction in Yokohama, 1994.
(B) The Third UN World Conference on Disaster Risk Reduction in Sendai, 2015.
(C) The UN Conference on Sustainable Development (Rio+20) in Rio de Janeiro, 2012.
(D) The World Conference on Disaster Reduction in Kobe, Hyogo, 2005.

47. Consider the following statements regarding disaster financial management competencies:
Statement I : "Knowledge of Procurement and Contracting Practices" is a key competency for a disaster financial management professional.
Statement II : During a disaster, procurement processes are often suspended entirely to speed up response.
Which of the following is correct?

NODIA

The use of mixed-methods designs in disaster research is highly beneficial because it achieves a more comprehensive and holistic understanding of complex events. By integrating both quantitative and qualitative approaches, researchers can measure physical hazards while also exploring the social dimensions of risk. This combined perspective allows for more effective disaster risk management, ensuring that both numerical and human factors are considered.

290. (A) an in-depth analysis of a specific event or community.
Case studies are a valuable qualitative method used to provide a detailed investigation of a single unit within its real-life context. In disaster research, this likely involves an in-depth analysis of a specific disaster event or the response of a particular community. By focusing on a single case, researchers can uncover nuanced details and complex interactions that broader studies might overlook.

291. (C) Grounded theory
Grounded theory is an inductive research approach where the goal is to develop a theory that is grounded directly in the data collected from the field. Instead of starting with a preconceived hypothesis, the researcher allows the theory to emerge through systematic observation. This approach is particularly useful in disaster scenarios that are new or poorly understood by the scientific community.

292. (A) Phenomenology
Phenomenology is a qualitative research approach that seeks to understand the essence of a lived experience. It focuses on identifying what individuals have in common as they experience a specific phenomenon, such as loss or displacement. For a researcher wanting to understand the shared experience of living in a temporary shelter, this approach provides the depth needed to capture reality.

293. (D) the researcher's immersion in a community to understand it from an insider's view.
The primary method of ethnography involves the researcher's immersion in a community or cultural group to understand it from an insider's perspective. By spending significant time with the group, the researcher can observe behaviors, values, and social structures firsthand. This deep engagement reveals hidden patterns of vulnerability and resilience essential for understanding how specific cultures respond to various disasters.

294. (B) narrative research analyzes stories of others, while autobiography is a first-person account by the researcher/subject.
Narrative research and autobiography are both qualitative methods that focus on personal histories, but they differ in their perspective. Narrative research involves collecting and analyzing the stories told by others to understand their experiences within a specific context. In contrast, an autobiography is a deeply personal, first-person account of an experience written by the subject themselves. Both provide rich, contextual insights.

295. (C) how survivors create a sense of order through everyday interactions.
Ethnomethodology is a research approach that examines how people use everyday conversation and social interactions to construct a sense of order. In the chaotic aftermath of a disaster, this method is highly relevant for studying how survivors rebuild social structures and navigate their new reality. By analyzing these mundane interactions, researchers can understand how communities establish stability and meaning after crises.

296. (D) To leverage big data and AI for prediction and situational awareness.
Computational methods play an important role in disaster research by leveraging big data, artificial intelligence, and simulation modeling. These tools are primarily used to predict disaster impacts and optimize evacuation routes. Additionally, they allow researchers to analyze social media data for enhanced situational awareness during crises. This technology-driven approach provides critical insights that help managers make faster, more informed decisions.

297. (A) rapid, on-the-ground data collection immediately after an event.
Disaster reconnaissance is a specialized form of field research characterized by rapid, on-the-ground data collection. It takes place in the immediate aftermath of an extreme event to

Click Here to Buy book on Amazon

knowledge generated is credible, honest, and beneficial.

281. (A) It integrates knowledge from academic and non-academic stakeholders for a holistic view.
Transdisciplinary research in the field of disasters involves an approach that integrates knowledge and methods from various academic disciplines alongside non-academic stakeholders. This method goes beyond simple collaboration by seeking to create a holistic and systemic understanding of complex societal problems. By including diverse perspectives, researchers can address the multifaceted nature of disasters more effectively and generate relevant knowledge.

282. (B) adaptable and ethically sound.
Conducting research in the chaotic and sensitive environments typical of disasters requires a unique methodological approach. Methods must be primarily adaptable and ethically sound to accommodate the unpredictable nature of these events while protecting vulnerable populations. Whether using qualitative, quantitative, or mixed-methods, researchers must ensure their techniques are suitable for the specific context and respect the dignity of participants.

283. (B) To explore the lived experiences of survivors.
Qualitative methods are highly valuable in disaster research for capturing the human dimensions of extreme events. For example, researchers may use these methods to explore the lived experiences and coping mechanisms of affected populations. This approach provides depth and context that numerical data cannot offer, allowing for a better understanding of how individuals perceive and respond to challenges.

284. (A) the specific phase of the disaster cycle.
The selection of an appropriate research method in a disaster setting is critically dependent on several factors, notably the specific phase of the disaster cycle. Whether the focus is on mitigation, preparedness, response, or recovery, the method chosen must be fit for purpose. This ensures that data collected is relevant to the immediate or long-term needs of the community.

285. (C) generate knowledge that is both rigorous and practically relevant.
Contemporary disaster research emphasizes the integration of diverse perspectives to address complex challenges posed by extreme events. The primary goal of this inclusive approach is to generate knowledge that is both academically rigorous and practically relevant. By combining insights from different fields, researchers can create effective strategies for reducing disaster risk and improving humanitarian outcomes for communities.

286. (D) Measuring risk using probabilities, magnitudes, and numerical data.
A quantitative approach to risk assessment is characterized by its reliance on statistical analysis, modeling, and numerical data. This method focuses on measuring hazard exposure, physical vulnerability, and potential losses in precise terms. By quantifying risk through probabilities and magnitudes, researchers provide essential information for policy-making and engineering. This data-driven perspective is crucial for developing objective management strategies.

287. (C) uncover nuanced insights into social vulnerability and perceptions.
Qualitative approaches to risk reduction are invaluable for exploring the social dimensions of disasters. Unlike quantitative methods, they delve into human perceptions, cultural factors, and underlying social causes of risk. By generating non-numerical data, these methods uncover nuanced insights into why certain communities are more vulnerable. This understanding is essential for strengthening local capacities and developing culturally appropriate risk strategies.

288. (B) Ethnography
Ethnography is a qualitative research approach that involves the researcher's immersion in a specific community or cultural group. This method is particularly suitable for gaining a deep understanding of a community's daily life and its relationship with local environmental hazards. By observing behaviors and social structures firsthand, researchers can reveal hidden patterns of vulnerability and resilience vital for planning.

289. (D) achieves a more comprehensive and holistic understanding.

NODIA

CHAPTER 03

Legal Framework, Policies and Governance

1. According to the Disaster Management Act, 2005, which of the following best defines a 'disaster'?
(A) Any event that disrupts the normal functioning of a community and can be managed through the deployment of available local resources.
(B) A catastrophe, mishap, or grave occurrence in any area, arising from natural or man-made causes, resulting in substantial loss of life.
(C) A small-scale incident that causes minor property damage, requiring no external assistance from state or national level authorities.
(D) A predicted weather event that has the potential to cause significant disruption to economic and social activities in the future.

2. Consider the following statements regarding the Disaster Management Act, 2005:
Statement I : The Act provides for the effective management of disasters and for matters connected therewith or incidental thereto.
Statement II : The Act was enacted following the experience of the Indian Ocean Tsunami in 2004.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

3. Which authority is constituted at the national level for disaster management in India under the Disaster Management Act, 2005?
(A) National Crisis Management Committee (NCMC)
(B) National Disaster Response Force (NDRF)
(C) National Disaster Management Authority (NDMA)
(D) National Executive Committee (NEC)

4. The 'Yokohama Strategy' is primarily associated with which of the following?
(A) A comprehensive global plan of action for disaster risk financing.
(B) A technical guideline for safer building codes and land use planning.
(C) A framework focusing on post-disaster reconstruction and rehabilitation.
(D) An international strategy for natural disaster reduction.

5. Which of the following is an INCORRECT statement regarding the National Policy on Disaster Management, 2009?
(A) It aims to build a safe and disaster-resilient India.
(B) It promotes a culture of prevention, mitigation, and preparedness.
(C) It focuses exclusively on response and relief operations.
(D) It was replaced by the National Disaster Management Plan of 2016.

6. The National Disaster Response Force (NDRF) is constituted for the purpose of specialist response to a threatening disaster situation or disaster. Under which Act was it constituted?
(A) The Environment (Protection) Act, 1986
(B) The Disaster Management Act, 2005
(C) The Civil Defence Act, 1968
(D) The National Security Act, 1980

7. Which of the following is NOT one of the seven global targets of the Sendai Framework for Disaster Risk Reduction 2015-2030?
(A) Achieve a substantial reduction in global disaster mortality rates.
(B) Achieve a substantial increase in the count of national strategies.

Downloaded from www.pdf.tube

(C) Substantially reduce direct disaster economic loss in relation to global GDP.
(D) Substantially increase global government expenditure on post-disaster relief.

8. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Disaster Management Act, 2005 mandates the establishment of Disaster Management Authorities at the National, State, and District levels.
Reason (R) : A multi-tiered institutional system is essential for a holistic and integrated approach to disaster management.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

9. The Hyogo Framework for Action 2005-2015 emphasized making disaster risk reduction a national and local priority. What was its first Priority for Action?
(A) Implement measures to reduce the underlying risk factors.
(B) Strengthen preparedness for an effective response at all levels.
(C) Ensure disaster risk reduction is a national priority with an institutional basis.
(D) Identify, assess, and monitor risks and enhance early warning systems.

10. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Authority)
P. National Disaster Management Authority
Q. State Disaster Management Authority
R. District Disaster Management Authority
S. National Disaster Response Force
List II: (Chairperson/Head)
1. District Collector/Magistrate
2. Prime Minister of India
3. Director General
4. Chief Minister of the State
(A) P-2, Q-4, R-1, S-3
(B) P-4, Q-2, R-1, S-3
(C) P-2, Q-1, R-4, S-3
(D) P-3, Q-4, R-2, S-1

11. What is the primary purpose of a District Disaster Management Plan (DDMP)?
(A) To allocate international funds for disaster relief.
(B) To create communication networks for international relief agencies.
(C) To formulate national policies on disaster prevention.
(D) To provide a framework for disaster management activities at the district level.

12. Consider the following statements regarding disaster financial management:
I. Maintaining accurate financial records is crucial for post-disaster audits.
II. Cash flow management is not a significant concern during emergency response.
III. Risk avoidance strategies are part of proactive financial management.
IV. Expense reimbursement for damage is handled without any formal assessment.
Which of the above statement(s) is/are correct?
(A) I and III only
(B) II and IV only
(C) I, II and III only
(D) I, III and IV only

13. The National Disaster Management Plan (NDMP), first released in 2016 and updated in 2019, is the first ever national plan prepared in the country. It is designed to be consistent with which international framework?
(A) The Yokohama Strategy
(B) The Millennium Development Goals
(C) The Sendai Framework for Disaster Risk Reduction
(D) The Hyogo Framework for Action

14. The State Disaster Response Fund (SDRF) is the primary fund available with State Governments for responses to notified disasters. What is the funding pattern for general category states?
(A) 50% from the Central Government and 50% from the State Government.
(B) 100% from the Central Government.
(C) 90% from the Central Government and 10% from the State Government.
(D) 75% from the Central Government and 25%

NODIA

from the State Government.

15. Arrange the following international frameworks in chronological order of their adoption:
1. Sendai Framework for DRR
2. Hyogo Framework for Action
3. Yokohama Strategy

Choose the correct answer from the options given below:
(A) 3, 2, 1
(B) 1, 2, 3
(C) 2, 3, 1
(D) 3, 1, 2

16. Who is the ex-officio Chairperson of the State Disaster Management Authority (SDMA)?
(A) The Governor of the State
(B) The Chief Minister of the State
(C) The Home Minister of the State
(D) The Chief Secretary of the State

17. Which of the following is the most appropriate description of 'supply chain management' in the context of disaster management?
(A) The process of financial record-keeping for audit purposes.
(B) The sequence of activities to procure, store, and deliver relief supplies to affected populations.
(C) The management of cash flow to and from the disaster site.
(D) The assessment of damage to infrastructure and economic losses.

18. Consider the following statements regarding the link between Sustainable Development Goals (SDGs) and Disaster Risk Reduction (DRR):
Statement I : SDG 11 (Sustainable Cities and Communities) includes a target to reduce the number of deaths and people affected by disasters.
Statement II : DRR is exclusively linked to environmental SDGs and has no connection with social or economic goals.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

19. The Disaster Mitigation Fund, as per the Disaster Management Act 2005, is to be established at which levels?
(A) National level only
(B) State and District levels only
(C) National and State levels
(D) National, State, and District levels

20. A state government is facing a severe cyclone. To meet the expenses of immediate relief, it would primarily use funds from which of the following?
(A) National Disaster Mitigation Fund
(B) Consolidated Fund of India
(C) Prime Minister's National Relief Fund
(D) State Disaster Response Fund

21. Which of the following is NOT a primary activity of Disaster Financial Management?
(A) Performing financial analysis of disaster-related projects.
(B) Maintaining accurate financial records for audits.
(C) Conducting search and rescue operations.
(D) Managing cash flow for emergency response.

22. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The National Disaster Management Plan (NDMP) 2019 incorporates a gender-sensitive and child-centric approach.
Reason (R) : Disasters disproportionately affect women, children, and other vulnerable groups, requiring tailored interventions.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

23. Which of the following best describes the principle of 'risk avoidance' in disaster financial management?
(A) Insuring all public assets against potential disaster damage.
(B) Allocating a large contingency fund for unexpected disaster events.

Click Here to Buy book on Amazon

(C) Quickly disbursing funds after a disaster has occurred.
(D) Deciding not to fund projects in high-risk zones to prevent future financial losses.

24. Consider the following statements about the priorities of the Hyogo Framework for Action (2005-2015):
I. Use knowledge, innovation, and education to build a culture of safety and resilience.
II. Reduce the underlying risk factors.
III. Substantially increase international cooperation to developing countries.
IV. Strengthen disaster preparedness for effective response.
V. Ensure that disaster risk reduction is a national and local priority.
Which of the above statement(s) is/are correct?
(A) I, II, IV, and V only
(B) I, III, and IV only
(C) II, III, IV, and V only
(D) I, II, III, IV, and V

25. The District Disaster Management Authority (DDMA) is chaired by the District Collector/ Magistrate. Who is the co-chairperson of the DDMA?
(A) The Superintendent of Police of the district
(B) The Chief Medical Officer of the district
(C) The elected representative of the local authority (Zila Parishad)
(D) The District Judge

26. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Fund Type)
P. National Disaster Response Fund
Q. State Disaster Mitigation Fund
R. National Disaster Mitigation Fund
S. State Disaster Response Fund
List II: (Purpose)
1. For projects exclusively for the purpose of mitigation at the state level.
2. For meeting the expenses for emergency response, relief and rehabilitation at the national level.
3. For projects exclusively for the purpose of mitigation at the national level.
4. For meeting the expenses for emergency response at the state level.
(A) P-2, Q-1, R-3, S-4
(B) P-4, Q-3, R-1, S-2
(C) P-2, Q-3, R-1, S-4
(D) P-3, Q-1, R-2, S-4

27. The National Policy on Disaster Management 2009 envisions a holistic and integrated approach to disaster management with an emphasis on which paradigm?
(A) Shifting from a community-based local focus to a top-down, centralized government-controlled strategy.
(B) Shifting from a proactive mitigation-focused model to a strategy based on purely reactive response operations.
(C) Shifting from a national-level framework to an approach that relies on international cooperative measures.
(D) Shifting from a relief-centric approach to a proactive prevention, mitigation, and preparedness-driven model.

28. In the context of disaster financial management, what does "debt monitoring" primarily involve?
(A) Tracking the personal loans taken by disaster victims.
(B) Supervising the loans and grants received by the government for disaster recovery.
(C) Monitoring the national debt to GDP ratio.
(D) Providing financial literacy programs to the affected community.

NODIA

29. Which of the following pairs of International Framework and its timeline is INCORRECT?
(A) Hyogo Framework for Action : 2005-2015
(B) Sendai Framework for DRR : 2015-2030
(C) Sustainable Development Goals : 2015-2025
(D) Yokohama Strategy : 1994-2004

30. The general superintendence, direction, and control of the National Disaster Response Force (NDRF) is vested in which body?
(A) The Ministry of Home Affairs
(B) The National Executive Committee (NEC)
(C) The Prime Minister's Office (PMO)
(D) The National Disaster Management Authority (NDMA)

31. Consider the following statements regarding disaster financial accounting systems:
Statement I : These systems are designed to

track and report on the use of funds for disaster-related activities.

Statement II : They are essential for transparency and accountability to funding agencies and the public.

Which of the following is correct?

(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

32. The National Disaster Management Plan (NDMP), first released in 2016 and updated in 2019, is the first ever national plan prepared in the country. It is designed to be consistent with which international framework?

(A) The five priorities of the Hyogo Framework.
(B) The four priority themes of the Sendai Framework.
(C) The eight goals of the Millennium Development Goals.
(D) The ten principles of the Yokohama Strategy.

33. Which of the following actions best illustrates "Project and Portfolio Management" in disaster financial management?

(A) Distributing food and water in a relief camp.
(B) Performing a financial analysis to select and oversee a portfolio of long-term recovery projects.
(C) Conducting a rapid damage assessment immediately after a disaster.
(D) Issuing early warnings for an impending cyclone.

34. As per the Disaster Management Act 2005, a 'State Executive Committee' is constituted to assist the State Disaster Management Authority (SDMA). Who heads this committee?

(A) The Chief Secretary of the State
(B) The Home Minister of the State
(C) The Governor of the State
(D) The Chief Minister of the State

35. The Sendai Framework for Disaster Risk Reduction (2015-2030) has four Priorities for Action. Which of the following is NOT one of these priorities?

(A) Understanding disaster risk.
(B) Strengthening disaster risk governance to manage disaster risk.
(C) Establishing a global fund for post-disaster compensation.
(D) Investing in disaster risk reduction for resilience.

36. Arrange the following institutional bodies in the correct hierarchical order as per the Disaster Management Act, 2005, from top to bottom:

1. District Disaster Management Authority
2. National Disaster Management Authority
3. State Disaster Management Authority

Choose the correct answer from the options given below:

(A) 2, 1, 3
(B) 1, 3, 2
(C) 2, 3, 1
(D) 3, 2, 1

37. A situation arises where the resources of a State are inadequate to deal with a disaster. In such a scenario, which fund can be accessed for support upon request from the State?

(A) State Disaster Mitigation Fund
(B) Contingency Fund of the State
(C) National Disaster Response Fund
(D) Chief Minister's Relief Fund

38. Consider the following statements related to the National Disaster Management Authority (NDMA):

I. It is the apex body for Disaster Management in India.
II. It consists of a chairperson and not more than nine members.
III. The Prime Minister of India is the ex-officio chairperson of the NDMA.
IV. It is responsible for laying down policies on disaster management.

Which of the above statement(s) is/are correct?

(A) I and II only
(B) I, III, and IV only
(C) II and IV only
(D) I, II, III, and IV

NODIA

39. In the context of humanitarian response, effective financial management ensures that aid reaches the intended beneficiaries. Which of the following practices is LEAST effective in ensuring this?

(A) Implementing robust tracking systems for aid distribution.

capture perishable data that might otherwise be lost. Researchers focus on documenting physical damage and initial social responses. This timely information is vital for understanding immediate impacts and for improving future response strategies.

298. (B) Epidemiological surveillance and mental health impacts.
Research methods for Health Emergency and Disaster Risk Management are specifically tailored to the health-related challenges of crises. These methods focus on public health systems, epidemiological surveillance, and the mental health impacts of disasters on populations. They evaluate the effectiveness of health interventions. This specialized focus is essential for protecting well-being and ensuring that health systems remain resilient during disasters.

299. (B) Community members are equitable partners in the research process.
Community-based participatory research is defined by its collaborative nature, where community members are treated as equitable partners in the research process. Unlike traditional models where researchers act as outside experts, this approach ensures that the community is involved in every stage. This partnership helps ensure that the study is relevant to local needs and provides tangible benefits to the community.

300. (A) potential for intrusion and re-traumatization of survivors.
Conducting research after a disaster presents significant ethical dilemmas that researchers must navigate carefully. A primary concern is the potential for intrusion and re-traumatization of survivors during data collection. Ensuring that research provides tangible benefits and respects participants is paramount. Ethical considerations must therefore be a central, guiding component of research design when dealing with vulnerable populations in crisis.

Downloaded from www.pdf.tube

(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

48. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Priority for Action)
P. Priority 1
Q. Priority 2
R. Priority 3
S. Priority 4
List II: (Description)
1. Investing in disaster risk reduction for resilience.
2. Understanding disaster risk.
3. Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction.
4. Strengthening disaster risk governance to manage disaster risk.
(A) P-1, Q-3, R-2, S-4
(B) P-2, Q-4, R-1, S-3
(C) P-2, Q-1, R-4, S-3
(D) P-4, Q-2, R-3, S-1

49. Which of the following is an example of an 'emergency protective measure' for which expense reimbursement might be sought in disaster financial management?
(A) Building a new, permanent community shelter.
(B) Sandbagging to protect a critical facility from imminent flooding.
(C) Constructing a mitigation dam long before any flood event.
(D) Conducting a long-term research study on climate change.

50. Consider the following statements regarding the key features of the Disaster Management Act, 2005:
I. Establishment of NDMA, SDMA, and DDMA.
II. Constitution of National Disaster Response Force (NDRF).
III. Creation of National and State Disaster Response and Mitigation Funds.
IV. Provision for penalties for obstruction and false claims.
V. It supersedes all other environmental and safety legislations.
Which of the above statement(s) is/are correct?
(A) I, II, and III only
(B) I, II, III, and IV only
(C) II, IV, and V only
(D) I, III, IV, and V only

51. The "paradigm shift" advocated in the National Policy on Disaster Management (2009) refers to a change from:
(A) A focus on natural disasters to a focus on man-made disasters.
(B) A government-led approach to a purely NGO-led approach.
(C) A response and relief-centric approach to a proactive and holistic approach.
(D) A focus on rural areas to a focus on urban areas.

52. The National Executive Committee (NEC), under the Disaster Management Act 2005, functions as the executive committee of the National Disaster Management Authority (NDMA). Who is the ex-officio chairperson of the NEC?
(A) The Prime Minister
(B) The Vice-Chairman of NDMA
(C) The Home Minister
(D) The Union Home Secretary

53. A key aspect of financial management for humanitarian response is ensuring accountability. This is best achieved through:
(A) Spending the funds as quickly as possible.
(B) Relying solely on verbal reports from field staff.
(C) Maintaining transparent financial records and allowing for audits.
(D) Limiting information shared with donors to avoid scrutiny.

NODIA

54. Arrange the following events related to disaster management in India in chronological order:
1. Enactment of the Disaster Management Act.
2. Gujarat Earthquake (Bhuj).
3. Adoption of the National Policy on Disaster Management.
4. Indian Ocean Tsunami.

Reason (R) : The urgency of providing life-saving supplies and services may require a flexible approach to standard, time-consuming procurement procedures.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

117. Which of the following correctly pairs a legislation with its primary relevance to disaster management?
(A) Information Technology Act - Regulating building codes for seismic safety.
(B) Indian Forest Act - Managing financial response to disasters.
(C) Epidemic Diseases Act - Managing the spread of disease following a disaster.
(D) Companies Act - Commanding the armed forces during a disaster.

118. The Sendai Framework for Disaster Risk Reduction (2015-2030) was adopted at which UN World Conference?
(A) The First UN World Conference in Yokohama
(B) The Third UN World Conference in Sendai
(C) The Second UN World Conference in Kobe
(D) The UN Conference on Sustainable Development in Rio de Janeiro

119. A district has experienced a major earthquake. The District Disaster Management Authority (DDMA) needs to coordinate the response. Its financial management team would be immediately concerned with:
(A) Finalizing the long-term reconstruction plan.
(B) Conducting a detailed audit of pre-disaster mitigation projects.
(C) Calculating the exact economic loss to global GDP.
(D) Accessing and managing funds for immediate relief, such as setting up shelters and providing first aid.

120. Which of the following is the best example of integrating Disaster Risk Reduction (DRR) into sectoral planning, as promoted by the National Policy on Disaster Management, 2009?
(A) The health sector planning for mass casualty management.
(B) The finance sector ignoring disaster risk in investment decisions.
(C) The education sector building schools without considering seismic safety.
(D) The agriculture sector promoting water-intensive crops in a drought-prone area.

121. The vision of the National Policy on Disaster Management, 2009 is to:
(A) Rely entirely on international aid for managing disasters within the country.
(B) Focus only on post-disaster relief and reconstruction activities.
(C) Build a safe and resilient India by developing a proactive and technology-driven strategy.
(D) Create a centralized command-and-control structure with no role for state or local bodies.

122. In the context of "Knowledge of Procurement and Contracting Practices" for disaster management, which principle is most critical during an emergency?
(A) Ensuring value for money, transparency, and speed of delivery.
(B) Maximizing profit for the suppliers.
(C) Following the longest possible tendering process to ensure competition.
(D) Procuring non-essential luxury items for relief camps.

123. The Disaster Management Act, 2005, defines 'mitigation' as measures aimed at:
(A) Responding to the immediate aftermath of a disaster.
(B) Reconstructing damaged infrastructure to its pre-disaster state.
(C) Providing financial compensation to victims.
(D) Reducing the risk, impact, or effects of a disaster.

124. Consider the following statements regarding international frameworks:
Statement I : The Hyogo Framework for Action was a binding international law.
Statement II : The Sendai Framework for

Click Here to Buy book on Amazon

(D) The International Decade for Natural Disaster Reduction (1990-1999)

63. Which of the following statements about the National Disaster Response Fund (NDRF) is INCORRECT?
(A) It can be used for funding long-term mitigation projects.
(B) It is a fund managed by the Central Government for meeting the expenses for emergency response.
(C) It is financed through a levy of a cess on certain items, called the National Calamity Contingent Duty.
(D) Any individual or institution can make contributions to the NDRF.

64. A competency-based question for a disaster financial manager: A major flood has destroyed critical public infrastructure. What is the first financial step you should take as part of the management team?
(A) Immediately begin procuring materials for long-term reconstruction.
(B) Conduct a rapid but thorough financial assessment of the damages and immediate needs.
(C) Apply for international loans without a damage estimate.
(D) Wait for the central government to announce a relief package before taking any action.

65. The National Policy on Disaster Management, 2009, covers various aspects of disaster management. Consider the following:
I. Prevention and Mitigation
II. Preparedness
III. Response and Recovery
IV. Climate Change Adaptation
V. International Cooperation
Which of the above are covered in the policy?
(A) I, II and III only
(B) I, II, III and IV only
(C) II, IV and V only
(D) I, II, III, IV and V

66. Who has the power to declare a 'severe disaster' or 'disaster of a severe nature', enabling the central government to step in with support?
(A) The Central Government
(B) The State Government
(C) The District Collector
(D) The United Nations

67. Consider the following statements regarding the Disaster Management Act, 2005:
Statement I : The Disaster Management Act, 2005 provides for civil and criminal liabilities for non-compliance with its provisions.
Statement II : Penalties are designed to ensure that government orders for disaster management are followed and to prevent misuse of relief materials.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

68. The Hyogo Framework for Action (HFA) had a 10-year plan with the expected outcome of:
(A) The complete eradication of disaster risks worldwide.
(B) The establishment of a global disaster response force under UN command.
(C) The creation of a binding international treaty on climate change.
(D) The substantial reduction of disaster losses, including lives and socioeconomic assets.

NODIA

69. In the context of Disaster Financial Management, 'performing financial analysis' for projects involves:
(A) Counting the number of people affected by a disaster.
(B) Distributing cash relief to disaster victims.
(C) Evaluating the cost-effectiveness and financial viability of recovery and mitigation projects.
(D) Preparing press releases about government aid.

70. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Framework/Strategy)
P. Yokohama Strategy
Q. Hyogo Framework for Action
R. Sendai Framework for DRR
S. Sustainable Development Goals
List II: (Primary Focus/Concept)
1. Managing risk and building resilience

(A) I and II only
(B) I, II, III, and IV only
(C) III, IV, and V only
(D) I, II, and V only

101. The National Institute of Disaster Management (NIDM) operates under the administrative control of which body, as per the Disaster Management Act, 2005?
(A) Ministry of Earth Sciences
(B) Indian Council of Social Science Research (ICSSR)
(C) National Disaster Management Authority (NDMA)
(D) University Grants Commission (UGC)

102. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Disaster Management Act, 2005, has provisions for declaring a 'state of disaster' but does not use the term 'state of emergency'.
Reason (R) : The legal framework for disaster management operates within the constitutional provisions and does not seek to supplant the powers related to proclaiming a national emergency.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

103. Which of the following best describes the linkage between the Sendai Framework and the Sustainable Development Goals (SDGs)?
(A) They are conflicting frameworks with opposing goals.
(B) They are mutually exclusive, with the Sendai Framework focusing on disasters and SDGs on development.
(C) The Sendai Framework is a sub-component of a single SDG.
(D) They are complementary and mutually reinforcing, as reducing disaster risk is essential for achieving sustainable development.

104. Which of the following is an example of a "Disaster Financial Assistance Program"?
(A) The Federal Emergency Management Agency (FEMA)'s Public Assistance Program in the USA.
(B) A local community bake sale to raise funds.
(C) A personal bank loan taken out by a business owner after a flood.
(D) The annual budget of the Ministry of Defence.

105. In a post-disaster scenario, a financial management team is tasked with "Project and Portfolio Management". This primarily involves:
(A) Managing the portfolio of stocks and bonds owned by the government.
(B) Providing immediate cash handouts to all affected individuals.
(C) Overseeing a range of recovery projects to ensure they are on budget and on schedule.
(D) Documenting the history of past disasters in the region.

106. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Body)
P. National Executive Committee (NEC)
Q. State Executive Committee (SEC)
R. District Disaster Management Authority (DDMA)
S. National Disaster Management Authority (NDMA)
List II: (Chairperson)
1. Chief Secretary of the State
2. District Collector
3. Prime Minister
4. Union Home Secretary
(A) P-3, Q-1, R-2, S-4
(B) P-4, Q-2, R-1, S-3
(C) P-4, Q-1, R-2, S-3
(D) P-1, Q-4, R-3, S-2

107. Which one of the following is NOT a strategic goal of the Hyogo Framework for Action?
(A) Integration of disaster risk reduction into sustainable development policies.
(B) Development and strengthening of institutions and mechanisms for resilience.
(C) Systematic incorporation of risk reduction approaches into emergency response.

Downloaded from www.pdf.tube

(A) It is chaired by the Union Home Minister and has up to 15 members.
(B) It is chaired by the President of India and comprises the chiefs of the armed forces.
(C) It is an ad-hoc body formed only during a national calamity.
(D) It is chaired by the Prime Minister and has a Vice-Chairperson and other members not exceeding nine.

79. The term 'Disaster Financial Assistance Programs' most accurately refers to:
(A) Established government or international programs that provide grants or loans for disaster recovery.
(B) Informal crowdfunding campaigns for disaster victims.
(C) Personal insurance policies held by individuals.
(D) The general budget of the country's finance ministry.

80. Identify the statements that correctly describe the Sendai Framework for Disaster Risk Reduction (2015-2030):
I. It is a 15-year, voluntary, non-binding agreement.
II. It recognizes the State has the primary role to reduce disaster risk.
III. It introduces seven global targets to measure progress.
IV. It focuses only on developing countries and excludes developed nations.
Which of the above statement(s) is/are correct?
(A) I and III only
(B) II and IV only
(C) I, II, and III only
(D) II, III, and IV only

81. Which of the following best defines the role of the National Executive Committee (NEC) as per the Disaster Management Act, 2005?
(A) To act as the nodal agency for international cooperation in disaster management.
(B) To assist the National Authority in its functions and act as its executive committee.
(C) To command and control the National Disaster Response Force during operations.
(D) To directly manage and implement relief work at the ground level.

82. In the context of disaster finance, what does 'cash flow management' primarily aim to ensure?
(A) That sufficient liquid funds are available to meet immediate and ongoing expenses during a disaster.
(B) That international donations exceed national expenditure.
(C) That all disaster-related expenditure is converted into long-term debt.
(D) That physical currency is securely stored away from the disaster zone.

83. Arrange the following actions in a logical sequence for post-disaster financial management:
1. Preparation for audits.
2. Disbursement of funds for emergency protective measures.
3. Damage assessment and expense estimation.
4. Submission of claims for expense reimbursement.
Choose the correct answer from the options given below:
(A) 2, 3, 4, 1
(B) 3, 2, 4, 1
(C) 1, 2, 3, 4
(D) 4, 3, 1, 2

84. The National Policy on Disaster Management (2009) aims to mainstream disaster risk reduction into the developmental planning process. What does this imply?
(A) Creating a separate five-year plan only for disaster management.
(B) Allocating the entire national budget to disaster management.
(C) Halting all development projects in disaster-prone areas.
(D) Ensuring that all new development projects are assessed for disaster risk and include mitigation measures.

NODIA

85. Which of the following is NOT a function of the District Disaster Management Authority (DDMA)?
(A) To prepare a District Disaster Management Plan.
(B) To ensure that the guidelines laid down by the NDMA and SDMA are followed.
(C) To deploy the National Disaster Response

Choose the correct answer from the options given below:
(A) 2, 4, 1, 3
(B) 4, 2, 1, 3
(C) 2, 1, 4, 3
(D) 1, 2, 4, 3

55. Which of the following pairs is CORRECTLY matched?
(A) SDMA - Headed by the Governor
(B) DDMA - Headed by the Superintendent of Police
(C) NDRF - Headed by the Cabinet Secretary
(D) NDMA - Headed by the Prime Minister

56. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Sendai Framework emphasizes the importance of "Building Back Better" in the recovery and reconstruction phase.
Reason (R) : The recovery phase presents a critical opportunity to build more resilient infrastructure and systems, reducing future risk.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

57. The responsibility for preparing the State Disaster Management Plan (SDMP) lies with which body?
(A) The State Legislature
(B) The Governor's Office
(C) The State Executive Committee
(D) The High Court of the State

58. Which of the following is NOT a component of the institutional structure established by the Disaster Management Act, 2005?
(A) National Crisis Management Committee (NCMC)
(B) National Disaster Management Authority (NDMA)
(C) State Disaster Management Authority (SDMA)
(D) District Disaster Management Authority (DDMA)

59. In the context of the link between SDGs and DRR, which statement is most accurate?
(A) DRR is only relevant to SDG 13 (Climate Action).
(B) The SDGs were formulated independently and have no targets related to disaster resilience.
(C) DRR primarily hinders economic development, which is the main focus of the SDGs.
(D) Achieving the SDGs is impossible without effectively managing disaster risk, which affects poverty, health, education, and infrastructure.

60. Consider the following statements regarding Disaster Financial Management Activities:
I. Damage assessment and needs analysis.
II. Management of cash flow and liquidity.
III. Procurement of relief materials and services.
IV. Formulation of international disaster law.
Which of the above statement(s) is/are correct?
(A) I and IV only
(B) II and III only
(C) I, II, and III only
(D) II, III, and IV only

61. What is 'expense reimbursement pertaining to damage' in disaster financial management refer to?
(A) The process of compensating victims for their personal property loss.
(B) The salary paid to disaster management officials.
(C) The process by which public entities receive repayment for costs incurred during response.
(D) The insurance premiums paid to cover potential future disasters.

62. The Yokohama Strategy and Plan of Action for a Safer World was a major outcome of which decade?
(A) The United Nations Decade of Education for Sustainable Development (2005-2014)
(B) The United Nations Decade on Biodiversity (2011-2020)
(C) The International Decade for Action "Water for Life" (2005-2015)

Click Here to Buy book on Amazon

(C) III, IV and V only
(D) I and V only

92. The State Disaster Management Plan (SDMP) is prepared by the State Executive Committee. It must be prepared after consultation with:
(A) International relief agencies only.
(B) Local authorities, district authorities, and the people's representatives.
(C) The National Disaster Management Authority only.
(D) The neighbouring states.

93. The concept of "Build Back Better" is a key component of which priority of the Sendai Framework?
(A) Priority 1: Understanding disaster risk.
(B) Priority 2: Strengthening disaster risk governance.
(C) Priority 4: Enhancing disaster preparedness for effective response.
(D) Priority 3: Investing in disaster risk reduction for resilience.

94. What is the cause-and-effect relationship between effective supply chain management and disaster response?
(A) Cause: Ineffective supply chain management; Effect: Faster delivery of aid.
(B) Cause: High transportation costs; Effect: Increased availability of relief materials.
(C) Cause: Lack of storage facilities; Effect: Better quality of perishable goods.
(D) Cause: Efficient procurement and logistics; Effect: Timely and targeted delivery of essential relief supplies.

95. In India, other than the Disaster Management Act 2005, several other legislations have provisions relevant to disaster management. Which act deals with the safety of workers in factories, which is crucial for preventing industrial accidents?
(A) The Factories Act, 1948
(B) The Indian Contract Act, 1872
(C) The Companies Act, 2013
(D) The Right to Information Act, 2005

96. Which of the following does NOT fall under the purview of functions of the National Disaster Management Authority (NDMA)?
(A) Laying down policies on disaster management.
(B) Conducting day-to-day relief distribution at the site of a disaster.
(C) Approving the National Plan.
(D) Laying down guidelines for different Ministries or Departments of the Government of India.

97. The funding pattern for State Disaster Response Fund (SDRF) for special category States (Himalayan and North-Eastern States) is:
(A) 75% Central share and 25% State share.
(B) 90% Central share and 10% State share.
(C) 50% Central share and 50% State share.
(D) 100% State share.

98. Which of the following is a core principle of the Yokohama Strategy (1994)?
(A) Disaster prevention, mitigation, and preparedness are better than disaster response alone.
(B) Disaster response is the most important component of disaster management.
(C) International financial institutions should lead all disaster management efforts.
(D) Technology is the only solution to reducing disaster risk.

99. An Urban Local Body is developing a disaster management plan as part of the District Disaster Management Plan (DDMP). This plan must ensure it is integrated with the broader:
(A) National Security Policy.
(B) International Trade Agreements.
(C) District Disaster Management Plan.
(D) State Industrial Policy.

100. Consider the following statements about disaster management plans in India:
I. The National Plan is prepared by the National Executive Committee.
II. The State Plan is prepared by the State Executive Committee.
III. The District Plan is prepared by the District Authority.
IV. All plans must be consistent with the plan from the level above.
V. The Prime Minister personally drafts the District Disaster Management Plan.
Which of the above statement(s) is/are correct?

Downloaded from www.pdf.tube

Force (NDRF) for international missions.
(D) To identify buildings and places which could be used as relief centers.

86. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Hyogo Framework for Action (HFA) was a landmark in gaining international and national commitment to disaster risk reduction.
Reason (R) : Prior to the HFA, the global approach to disasters was largely focused on post-event response rather than proactive risk reduction.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

87. Which of the following is a key principle of the Sendai Framework regarding the scope of disaster risk reduction?
(A) It applies only to natural hazards and excludes technological and biological hazards.
(B) It is limited to geological hazards like earthquakes and volcanoes.
(C) It focuses solely on climate-related disasters such as floods and droughts.
(D) It has an expanded scope that includes natural, technological, and biological hazards.

88. Consider the following statements regarding disaster funds:
Statement I : The Disaster Response Fund is used for meeting expenses for emergency response, relief and rehabilitation.
Statement II : The Disaster Mitigation Fund is used for funding projects aimed at reducing the risk and severity of disasters.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

89. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Provision)
P. Section 2(d) of the Disaster Management Act, 2005
Q. Section 14 of the Disaster Management Act, 2005
R. Section 46 of the Disaster Management Act, 2005
S. Section 25 of the Disaster Management Act, 2005
List II: (Subject)
1. Establishment of State Disaster Management Authority
2. Constitution of National Disaster Response Fund
3. Constitution of District Disaster Management Authority
4. Definition of 'Disaster'
(A) P-4, Q-1, R-2, S-3
(B) P-1, Q-4, R-3, S-2
(C) P-4, Q-2, R-1, S-3
(D) P-2, Q-3, R-4, S-1

90. An important aspect of disaster financial management is "maintaining accurate financial records and documents in preparation for audits". Why is this crucial?
(A) To ensure transparency and eligibility for reimbursement from other government levels or donors.
(B) To increase the administrative burden on relief workers.
(C) To keep the details of expenditure secret from the public.
(D) To create a historical archive of disasters with no practical use.

91. The National Disaster Management Plan (NDMP), 2019, provides a framework and direction to government agencies for various activities. Consider the following:
I. Prevention of disasters
II. Mitigation of disaster impacts
III. Response to disaster events
IV. Recovery from disasters
V. International diplomacy
Which of the above statement(s) is/are correct?
(A) I, II and IV only
(B) I, II, III and IV only

NODIA

(D) Mandating every country to contribute 1% of its GDP to a global disaster fund.

108. Which body is responsible for laying down guidelines for the minimum standards of relief to be provided to persons affected by disaster?
(A) The Supreme Court of India
(B) The National Disaster Management Authority (NDMA)
(C) The National Human Rights Commission
(D) The NITI Aayog

109. Consider the following statements regarding national disaster funds:
Statement I : The National Disaster Mitigation Fund (NDMF) is utilized for carrying out mitigation activities.
Statement II : The National Disaster Response Fund (NDRF) is utilized for providing immediate relief.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

110. Which international instrument first formally recognized the link between disaster reduction and sustainable development, laying the groundwork for future frameworks?
(A) The Sendai Framework
(B) The Kyoto Protocol
(C) The Paris Agreement
(D) The Yokohama Strategy

111. The financial management for humanitarian response must be adaptable. Which of the following best explains why?
(A) Because disaster situations are often chaotic, uncertain, and rapidly evolving.
(B) Because accounting standards change every day during a disaster.
(C) Because donors prefer complex and rigid financial systems.
(D) Because there is always a surplus of funds in humanitarian crises.

112. The National Disaster Management Plan is required to be reviewed and updated annually. This is to ensure:
(A) It remains a static, historical document.
(B) It incorporates the latest scientific knowledge and changing risk profiles.
(C) It complies with changing political ideologies.
(D) It reduces the overall budget for disaster management each year.

113. Consider the following provisions of the Disaster Management Act, 2005:
I. Penalties for obstruction of any officer or employee in the discharge of functions.
II. Penalties for making a false claim for any relief or assistance.
III. Protection of action taken in good faith by authorities.
IV. Power of the central government to issue directions to any authority.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) III and IV only
(C) I, II, and III only
(D) I, II, III, and IV

114. The term 'risk avoidance' as a strategy in disaster financial management would involve which of the following actions?
(A) Relocating a planned critical infrastructure project from a high-risk coastal zone to a safer inland location.
(B) Buying insurance for a building located in a known flood plain.
(C) Developing an emergency evacuation plan for a community in a landslide-prone area.
(D) Stockpiling relief supplies in anticipation of a disaster.

115. Who among the following is NOT an ex-officio member of the District Disaster Management Authority (DDMA)?
(A) The Chief Executive Officer of the DDMA
(B) The Superintendent of Police of the District
(C) The Governor of the State
(D) The Chief Medical Officer of the District

116. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : Procurement and contracting practices often need to be expedited during a disaster.

Click Here to Buy book on Amazon

2. Connection between poverty, development, and disaster risk
3. Building resilience of nations and communities
4. Guidelines for natural disaster prevention, preparedness, and mitigation

(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-1, S-2
(C) P-3, Q-4, R-2, S-1
(D) P-2, Q-1, R-4, S-3

71. Which body is responsible for approving the District Disaster Management Plan (DDMP)?
(A) The National Disaster Management Authority (NDMA)
(B) The State Executive Committee
(C) The District Planning Committee
(D) The State Disaster Management Authority (SDMA)

72. A key component of a Disaster Financial Accounting System is its ability to:
(A) Segregate and track costs by disaster event, project, and funding source.
(B) Predict the exact date and time of the next disaster.
(C) Automatically disburse funds to all citizens in an affected area.
(D) Communicate weather forecasts to the public.

73. The predecessor to the Sendai Framework for Disaster Risk Reduction (DRR) was the Hyogo Framework for Action. A key criticism of the Hyogo Framework that the Sendai Framework sought to address was:
(A) It was too focused on mitigation and ignored response.
(B) It was overly prescriptive and did not allow for local context.
(C) It was a non-binding instrument with a lack of measurable targets.
(D) It focused only on man-made disasters.

74. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Disaster Management Act, 2005 establishes a dedicated, specialized force, the National Disaster Response Force (NDRF), for disaster response.
Reason (R) : Past experiences showed that a professionally trained and equipped force is more effective in specialized response operations than ad-hoc arrangements.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

75. The National Disaster Management Plan (NDMP) 2019 provides a framework for which of the following?
(A) Only the response phase of a disaster.
(B) Only international cooperation in disaster management.
(C) Only financial management for disasters.
(D) All phases of the disaster management cycle.

76. In financial management for humanitarian response, which of the following is a primary challenge?
(A) Lack of disasters to respond to.
(B) Balancing the need for speed and flexibility with the requirements of financial control and accountability.
(C) An overabundance of trained financial personnel in disaster zones.
(D) Having too much data and information to process.

77. The Sendai Framework for Disaster Risk Reduction aims to achieve the substantial reduction of disaster risk and losses by 2030. Which of the following is a key feature that distinguishes it from the Hyogo Framework?
(A) It has a stronger focus on the role of the state in managing disaster risk.
(B) It is the first framework to acknowledge man-made hazards.
(C) It includes seven global targets to measure progress.
(D) It focuses exclusively on post-disaster recovery.

NODIA

78. Consider the composition of the National Disaster Management Authority (NDMA). Which statement is correct?

Disaster Risk Reduction is a voluntary, non-binding agreement.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is false, but Statement II is true.
(D) Statement I is true, but Statement II is false.

125. The National Disaster Response Fund (NDRF) and State Disaster Response Fund (SDRF) were established based on the recommendations of which body?
(A) The NITI Aayog
(B) The World Bank
(C) The 13th Finance Commission
(D) The National Security Council

126. Consider the following institutional arrangements:
I. National Disaster Management Authority (NDMA)
II. State Disaster Management Authority (SDMA)
III. District Disaster Management Authority (DDMA)
IV. National Crisis Management Committee (NCMC)
V. National Disaster Response Force (NDRF)
Which of these were established under the specific provisions of the Disaster Management Act, 2005?
(A) I, II, III and V only
(B) IV and V only
(C) I, II and III only
(D) I, II, III, IV and V

127. Which of the following is a key target of the Sendai Framework related to infrastructure?
(A) Substantially reduce disaster damage to critical infrastructure and disruption of basic services.
(B) Substantially increase the number of destroyed critical infrastructures.
(C) Ensure all critical infrastructure is owned and operated by the government.
(D) Relocate all critical infrastructure to a single, centralized location in each country.

128. The primary legal instrument that governs disaster management at the national level in India is:
(A) The Environment (Protection) Act, 1986
(B) The Disaster Management Act, 2005
(C) The Indian Penal Code, 1860
(D) The National Green Tribunal Act, 2010

129. Financial management for humanitarian response faces unique challenges. Which of the following is one such major challenge?
(A) Having too many rules and regulations that cannot be bypassed.
(B) Operating in environments with damaged infrastructure and weak or non-existent banking systems.
(C) Lack of need for financial resources.
(D) An over-supply of qualified accountants in disaster zones.

130. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The District Disaster Management Authority (DDMA) is a critical link in the disaster management structure.
Reason (R) : The district is the primary administrative unit for planning and implementation of disaster management activities at the grassroots level.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

131. Which of the following pairs is INCORRECTLY matched?
(A) NDMA - Chaired by Prime Minister
(B) SDMA - Chaired by Chief Minister
(C) NEC - Chaired by Home Minister
(D) DDMA - Chaired by District Collector

132. The National Policy on Disaster Management (2009) calls for a 'multi-sectoral' approach. This means:
(A) Only the disaster management department is responsible for all actions.
(B) Only the private sector should manage disasters.
(C) Every disaster should be managed by a different country.

Downloaded from www.pdf.tube

(D) Across all phases of the disaster lifecycle, including mitigation, preparedness, response, and recovery.

165. The role of the National Disaster Response Force (NDRF) is primarily that of a:
(A) Policy-making body.
(B) Financial disbursement agency.
(C) Specialist response force for search, rescue, and relief.
(D) Long-term reconstruction agency.

166. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Disaster Management Act, 2005 gives the District Disaster Management Authority the power to take over buildings and resources for response operations.
Reason (R) : During a disaster, immediate access to resources is critical for saving lives, and normal procedures may be too slow.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

167. Which international framework set the goal of substantially reducing global disaster mortality by 2030?
(A) The Yokohama Strategy
(B) The Hyogo Framework for Action
(C) The Millennium Development Goals
(D) The Sendai Framework for Disaster Risk Reduction

168. In the context of disaster financial management, 'portfolio management' refers to:
(A) Managing a collection of individual recovery and mitigation projects as a single portfolio to optimize outcomes and resources.
(B) Managing the investment portfolio of the disaster management authority's staff.
(C) Creating a photo portfolio of disaster damage for media dissemination.
(D) Managing the supply chain of relief items as a portfolio of goods.

169. What is the fundamental difference between the Disaster Response Fund and the Disaster Mitigation Fund?
(A) The Response Fund is at the national level, while the Mitigation Fund is only at the state level.
(B) The Response Fund is financed by international donors, while the Mitigation Fund is financed by domestic taxes.
(C) The Response Fund is for post-disaster activities, while the Mitigation Fund is for pre-disaster risk reduction activities.
(D) There is no fundamental difference; the names are used interchangeably.

170. Which of the following is an example of a related legislation whose provisions can be crucial during a disaster situation, apart from the Disaster Management Act?
(A) The Motor Vehicles Act (for movement of emergency vehicles)
(B) The Copyright Act
(C) The Patent Act
(D) The Foreign Trade Act

NODIA

171. The National Policy on Disaster Management, 2009, emphasizes capacity development. This includes all the following EXCEPT:
(A) Training of response personnel.
(B) Public awareness campaigns.
(C) Strengthening institutional capabilities.
(D) Encouraging risky behavior among citizens.

172. Consider the following statements regarding the District Disaster Management Authority (DDMA):
Statement I : The Chairperson of the District Disaster Management Authority is the elected representative of the local Zila Parishad.
Statement II : The co-chairperson of the DDMA is the District Collector/Magistrate.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

173. The Yokohama Strategy (1994) identified that disaster vulnerability was increasing due to factors like:
(A) A global decline in the frequency of natural

(C) 1, 2, 3
(D) 2, 3, 1

141. The establishment of State and National Disaster Mitigation Funds under the Disaster Management Act, 2005, reflects a shift towards:
(A) A reactive, response-only approach.
(B) Dependence on foreign aid for mitigation.
(C) Proactive investment in risk reduction measures.
(D) A belief that mitigation is not financially viable.

142. A city is planning a new metro rail project through a seismically active area. Mainstreaming Disaster Risk Reduction (DRR), as per the National Disaster Management Plan (NDMP) 2019, would require:
(A) Cancelling the project immediately.
(B) Ignoring the seismic risk to save costs.
(C) Building the metro line above ground only.
(D) Incorporating earthquake-resistant design standards into the project plan.

143. One of the seven global targets of the Sendai Framework is to "Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020". The National Disaster Management Plan (2016/2019) of India is a direct step towards fulfilling this target.
(A) True
(B) False
(C) Partially True
(D) Cannot be determined

144. The composition of the Disaster Financial Management Team would most appropriately include experts in:
(A) Geology and seismology.
(B) Accounting, procurement, project management, and public administration.
(C) Search and rescue techniques.
(D) Media relations and public speaking.

145. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Disaster Management Act, 2005, is a comprehensive law that covers all aspects of disaster management.
Reason (R) : The Act replaced all pre-existing laws related to environmental protection and industrial safety.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

146. Which of the following frameworks for the first time put a strong emphasis on community participation and local capacities?
(A) The Yokohama Strategy
(B) The Sendai Framework for Disaster Risk Reduction
(C) The Hyogo Framework for Action
(D) The Sustainable Development Goals

147. What is the primary cause-and-effect relationship between good financial record-keeping and post-disaster audits?
(A) Cause: Good records; Effect: Failure of audit and loss of funding.
(B) Cause: No records; Effect: Quick and easy audit process.
(C) Cause: Good records; Effect: Successful audit, accountability, and smoother reimbursement.
(D) Cause: Complicated records; Effect: Increased trust from donors.

148. The National Disaster Management Plan (NDMP) 2019 is organised based on the four priorities of the Sendai Framework and covers five thematic areas of disaster management. Which one of the following is NOT one of those thematic areas?
I. Understanding Risk
II. Inter-Agency Coordination
III. DRR Governance
IV. Post-Disaster Economic Sanctions
(A) Understanding Risk
(B) Inter-Agency Coordination
(C) DRR Governance
(D) Post-Disaster Economic Sanctions

149. The State Executive Committee (SEC) is mandated to prepare the State Disaster

Click Here to Buy book on Amazon

V. The National Disaster Response Force (NDRF) is a civilian force comprised of volunteers.

Which of the above statement(s) is/are correct?
(A) I, II, III and V only
(B) II, III, and IV only
(C) I, II, III, and IV only
(D) I, III, IV, and V only

182. The National Disaster Management Plan (NDMP), 2019, enhances the previous version by including new features such as:
(A) A complete focus on only earthquakes.
(B) Catastrophe-wise strategies and resource mobilization.
(C) Exclusion of the roles of the private sector.
(D) Removal of all references to the Sendai Framework.

183. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : Financial management for humanitarian response is significantly more complex than standard corporate finance.
Reason (R) : It operates in high-stakes, time-sensitive, and chaotic environments with challenges like damaged infrastructure, security risks, and urgent human needs.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

184. The legal mandate for the creation of District Disaster Management Plans (DDMPs) comes from:
(A) The Disaster Management Act, 2005.
(B) A resolution by the United Nations.
(C) The State Panchayat Raj Act.
(D) A recommendation from the World Bank.

185. A key innovation of the Sendai Framework compared to the Hyogo Framework is its focus on:
(A) The economic case for disaster risk reduction.
(B) The exclusive role of national governments.
(C) A people-centered, all-of-society approach with defined roles for all stakeholders.
(D) Reducing the number of priorities for action from five to two.

186. Which of the following is a key component of a robust 'Disaster Financial Accounting System'?
(A) The capacity to track expenses by specific disaster, location, project, and category of spending.
(B) The ability to hide expenditures from auditors.
(C) The use of a single, un-itemized ledger for all disaster spending.
(D) A system that only records income and donations, not expenses.

187. The National Policy on Disaster Management, 2009, covers various types of disasters. This includes all of the following EXCEPT:
I. Natural disasters like floods and earthquakes.
II. Man-made disasters like industrial accidents.
III. Public health emergencies like epidemics.
IV. Personal financial crises of individuals.
(A) Natural disasters like floods and earthquakes.
(B) Man-made disasters like industrial accidents.
(C) Public health emergencies like epidemics.
(D) Personal financial crises of individuals.

NODIA

188. Which of the following is an example of a Disaster Financial Assistance Program at the international level?
(A) The Chief Minister's Relief Fund of a state in India.
(B) The Central Emergency Response Fund (CERF) of the United Nations.
(C) A local municipality's contingency budget.
(D) The Prime Minister's National Relief Fund (PMNRF) in India.

189. Consider the following statements regarding disaster management plans:
Statement I : State Disaster Management Plans (SDMPs) are standalone documents created without reference to any national policy.
Statement II : District Disaster Management Plans (DDMPs) are created in isolation without

157. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Fund/Mechanism)
P. National Disaster Response Fund (NDRF)
Q. State Disaster Mitigation Fund (SDMF)
R. Expense Reimbursement
S. Supply Chain Management
List II: (Primary Function)
1. Process for public entities to recover costs of disaster operations.
2. Sourcing and delivering relief supplies efficiently.
3. Exclusively for funding mitigation projects at the state level.
4. For meeting immediate relief and response expenses for severe calamities.
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-2, S-1
(C) P-3, Q-4, R-1, S-2
(D) P-4, Q-3, R-1, S-2

158. Which of the following is NOT a power or function of the National Executive Committee (NEC)?
(A) To act as the coordinating and monitoring body for disaster management.
(B) To prepare the National Disaster Management Plan.
(C) To provide information to the public on disasters.
(D) To appoint the Chairperson of the State Disaster Management Authority.

159. The Sendai Framework's emphasis on "all-of-society engagement and partnership" is a progression from the Hyogo Framework's focus on:
(A) A whole-of-government approach.
(B) Top-down government action.
(C) International donors only.
(D) Scientific community only.

160. Which is the MOST appropriate reason for the Disaster Management Act, 2005 making the Prime Minister the head of the National Disaster Management Authority (NDMA)?
(A) To give the Prime Minister an additional portfolio.
(B) To ensure the highest level of political and administrative authority is vested in the apex body for effective command, control, and policy direction.
(C) To follow a tradition from the British colonial era.
(D) To bypass the role of the President of India in national emergencies.

161. A district's financial management team is preparing for a post-disaster audit by a state agency. Which of the following documents would be LEAST relevant for this audit?
(A) Invoices and receipts for procured relief materials.
(B) Attendance records from a public awareness campaign held five years ago.
(C) Payroll records for emergency personnel.
(D) Contracts awarded for debris removal.

NODIA

162. Consider the following statements about disaster management funding in India:
I. The State Disaster Response Fund (SDRF) is the primary fund with the states.
II. The National Disaster Response Fund (NDRF) supplements the SDRF for disasters of a severe nature.
III. Both funds can be used for either response or mitigation activities without distinction.
IV. The Finance Commission recommends the size and funding pattern of these funds.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) I, II, and IV only
(C) III and IV only
(D) I, II, III, and IV

163. How does the National Disaster Management Plan (NDMP) 2019 link to the Sustainable Development Goals (SDGs)?
(A) It rejects the SDGs as being irrelevant to disaster management.
(B) It only links to the SDG on climate action.
(C) It explicitly maps the activities under the plan to the relevant SDG targets.
(D) It is a confidential document and its links to SDGs are not public.

164. The concept of 'Disaster Financial Management' encompasses activities:
(A) Only during the response phase.
(B) Only during the recovery phase.
(C) Only before a disaster strikes.

Management Plan. This plan must be approved by:
(A) The National Executive Committee
(B) The Chief Minister's Office directly
(C) The State Disaster Management Authority
(D) The NITI Aayog

150. Consider the following statements regarding international frameworks:
I. The Yokohama Strategy emphasized a shift from response to prevention and preparedness.
II. The Hyogo Framework provided a detailed plan with five priorities for action.
III. The Sendai Framework introduced measurable global targets for DRR.
IV. The Sustainable Development Goals (SDGs) have targets that are directly and indirectly linked to reducing disaster risk.
V. All these frameworks are legally binding treaties on all UN member states.
Which of the above statement(s) is/are correct?
(A) I, II, and V only
(B) II, III, IV, and V only
(C) I, II, III, and IV only
(D) I, III, and V only

151. Which of the following is a key activity under 'debt monitoring' in post-disaster financial management?
(A) Providing loans to disaster victims.
(B) Providing low-interest personal loans to the affected community members.
(C) Monitoring the stock market fluctuations after a disaster.
(D) Tracking the repayment schedule and conditions of loans taken by the government for reconstruction.

152. Consider the following statements regarding the State Disaster Response Fund (SDRF):
Statement I : All expenditure from the State Disaster Response Fund (SDRF) must conform to the norms and guidelines set by the Central Government.
Statement II : This is to ensure a minimum standard of relief and uniform application across the country.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

153. One of the distinguishing features of the institutional arrangement under the Disaster Management Act, 2005 is its:
(A) Exclusive focus on the national level.
(B) Complete reliance on non-governmental organizations.
(C) Vertically and horizontally integrated structure from national to district level.
(D) Ad-hoc and temporary nature.

154. According to the Sendai Framework, the 'all-of-society' approach to disaster risk reduction (DRR) means that:
(A) DRR requires the participation of all stakeholders, including government, civil society, the private sector, and academia.
(B) Only the central government is responsible for disaster risk reduction.
(C) Disaster risk reduction is the responsibility of the United Nations alone.
(D) Each citizen is individually responsible for all aspects of their own safety.

155. A financial manager in a disaster-struck region finds that local procurement rules are causing a critical delay in acquiring life-saving medicines. "Knowledge of Procurement and Contracting Practices" would enable them to:
(A) Ignore the problem and wait for the standard process to finish.
(B) Cancel the procurement of medicines altogether.
(C) Purchase the medicines with their own personal funds.
(D) Understand and correctly apply emergency procurement procedures that allow for faster acquisition while maintaining accountability.

156. The National Policy on Disaster Management (2009) promotes a 'culture of prevention'. Which action best reflects this principle?
(A) Waiting for a flood to occur and then rescuing people.
(B) Building earthquake-resistant schools in a seismic zone.
(C) Distributing relief materials after a cyclone.
(D) Documenting the losses after a landslide.

Downloaded from www.pdf.tube

hazards.
(B) The success of global mitigation efforts.
(C) Population growth, urbanization, and environmental degradation.
(D) The decrease in global poverty levels.

174. A key knowledge requirement for a disaster financial manager is 'Procurement and Contracting Practices'. This is because:
(A) They need to be able to sell relief goods for a profit.
(B) They are personally responsible for signing all international treaties.
(C) They need to write legally complex contracts from scratch during an emergency.
(D) They must ensure that the acquisition of goods and services is done in a timely, fair, and accountable manner.

175. The institutional arrangement for disaster management in India under the Disaster Management Act, 2005 is best described as:
(A) Decentralized and integrated.
(B) Centralized and military-led.
(C) Run entirely by NGOs.
(D) An ad-hoc system with no permanent structures.

176. Which of the following actions directly contributes to achieving the Sendai Framework's Priority 1: 'Understanding disaster risk'?
(A) Distributing food packets after a flood.
(B) Conducting a multi-hazard risk assessment for a city.
(C) Training a search and rescue team.
(D) Lobbying for increased international aid.

177. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Term from Financial Management)
P. Cash flow management
Q. Risk avoidance
R. Expense reimbursement
S. Financial analysis
List II: (Example/Activity)
1. Deciding not to build a hospital in a known landslide zone.
2. Evaluating the cost-benefit ratio of a flood mitigation project.
3. Ensuring enough liquid funds are on hand for emergency procurement.
4. A district claiming costs from the state for running relief camps.
(A) P-3, Q-1, R-4, S-2
(B) P-1, Q-3, R-2, S-4
(C) P-3, Q-2, R-4, S-1
(D) P-4, Q-1, R-2, S-3

178. The primary role of the State Disaster Management Authority (SDMA) is to:
(A) Lay down the State disaster management policy and plan.
(B) Lay down the disaster management policy for the entire country.
(C) Directly command the NDRF battalions.
(D) Manage the financial accounts of the District authorities.

179. The transition from the Hyogo Framework for Action (HFA) to the Sendai Framework for Disaster Risk Reduction (SFDRR) marked a shift from focusing on 'managing disasters' to:
(A) Focusing only on disaster response.
(B) Ignoring man-made hazards.
(C) Focusing on 'managing disaster risk'.
(D) Reducing the role of governments.

180. A government agency has spent funds from the Disaster Response Fund. To receive reimbursement or to justify the expenditure, they must adhere to a process of disaster assessment and expense documentation. This demonstrates the principle of:
(A) Financial secrecy.
(B) Profit maximization.
(C) Independent action without oversight.
(D) Accountability and transparency.

NODIA

181. Consider the following statements about the Disaster Management Institutional framework in India:
I. The National Disaster Management Authority (NDMA) is headed by the Prime Minister.
II. The State Disaster Management Authority (SDMA) is headed by the Chief Minister.
III. The District Disaster Management Authority (DDMA) is headed by the District Collector.
IV. The National Executive Committee is headed by the Union Home Secretary.

(D) Disaster management is the shared responsibility of various government departments, agencies, and stakeholders.

133. One of the global targets of the Sendai Framework is to substantially increase the availability of and access to multi-hazard early warning systems. This directly corresponds to which Priority for Action?
(A) Priority 1: Understanding disaster risk.
(B) Priority 2: Strengthening disaster risk governance.
(C) Priority 4: Enhancing disaster preparedness.
(D) Priority 3: Investing in DRR for resilience.

134. A post-disaster audit is being planned. What is the primary purpose of "maintaining accurate financial records and documents"?
(A) To fulfill a minor administrative requirement for the local government.
(B) To demonstrate financial accountability and justify expenditures.
(C) To identify individuals for prosecution.
(D) To create more paperwork for government officials.

135. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Plan)
P. National Disaster Management Plan
Q. State Disaster Management Plan
R. District Disaster Management Plan
S. Local/Community Level Plan
List II: (Primary Responsibility)
1. District Disaster Management Authority
2. State Executive Committee
3. National Executive Committee
4. Panchayat/Urban Local Body
(A) P-1, Q-2, R-4, S-3
(B) P-3, Q-2, R-1, S-4
(C) P-2, Q-3, R-4, S-1
(D) P-4, Q-1, R-2, S-3

136. Which of the following is NOT a 'major international legal instrument dealing specifically with disasters'?
(A) The Geneva Conventions
(B) Sendai Framework for DRR
(C) Hyogo Framework for Action
(D) Yokohama Strategy

137. The success of a District Disaster Management Plan (DDMP) heavily relies on:
(A) Its complete independence from the State and National plans.
(B) Its focus solely on high-technology solutions.
(C) Its effective integration with local-level plans and community participation.
(D) Its preparation by an international consultant without local input.

138. Which body is responsible for ensuring that State Governments draw up their own disaster management plans as per the guidelines of the national authority?
(A) The National Disaster Management Authority (NDMA)
(B) The State Government itself
(C) The District Disaster Management Authority (DDMA)
(D) The NITI Aayog

139. Consider the following statements about the National Disaster Response Force (NDRF):
I. It is a specialized force for responding to disaster situations.
II. Its general superintendence is vested in the NDMA.
III. It can be deployed in any part of the country and abroad.
IV. It is composed of personnel on deputation from para-military forces.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) I, II and IV only
(C) III and IV only
(D) I, II, III and IV

140. Arrange the following disaster management authorities in the correct descending order of geographical jurisdiction:
1. State Disaster Management Authority (SDMA)
2. National Disaster Management Authority (NDMA)
3. District Disaster Management Authority (DDMA)
Choose the correct answer from the options given below:
(A) 2, 1, 3
(B) 3, 1, 2

Click Here to Buy book on Amazon

input from local bodies.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

190. What is the primary purpose of having a dedicated Disaster Mitigation Fund?
(A) To ensure that funds are available for immediate relief distribution after a disaster.
(B) To pay the salaries of the National Disaster Response Force.
(C) To provide loans to foreign countries affected by disasters.
(D) To ensure that long-term risk reduction is not neglected due to the immediate pressures of post-disaster response.

191. The Disaster Management Act, 2005, provides for penalties for making false claims for relief. This provision is intended to:
(A) Prevent misuse of relief resources and ensure they reach the genuinely affected.
(B) Discourage people from seeking help.
(C) Increase government revenue through fines.
(D) Punish disaster management officials.

192. Which of the following is a key activity in supply chain management for disaster relief?
(A) Financial auditing of past projects.
(B) Last-mile delivery of goods to affected populations.
(C) Drafting national disaster policy.
(D) Conducting seismic hazard mapping.

193. The Sendai Framework has seven global targets. Four of these are related to reducing losses, and three are related to increasing capacity. Which of the following is one of the three "increase" targets?
(A) Substantially reduce the number of affected people globally.
(B) Substantially increase international cooperation to developing countries.
(C) Substantially reduce direct disaster economic loss.
(D) Substantially reduce global disaster mortality.

194. The institutional framework for disaster management in India is designed to be:
(A) Participatory and collaborative.
(B) Hierarchical and rigid.
(C) Temporary and event-based.
(D) Secretive and non-transparent.

195. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The National Disaster Management Plan (NDMP) is aligned with the Sendai Framework's priorities.
Reason (R) : India is a signatory to the Sendai Framework and is committed to implementing its goals and priorities.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

196. The process of disaster assessment and expense reimbursement for damage to public infrastructure is a critical component of:
(A) Pre-disaster mitigation planning.
(B) Early warning dissemination.
(C) Community awareness campaigns.
(D) Post-disaster financial recovery for public entities.

197. The Disaster Management Act of 2005 was a legislative response to the need for a more structured and comprehensive approach to disasters, highlighted by events such as:
(A) The 1984 Bhopal Gas Tragedy.
(B) The 2013 North India Floods.
(C) The 1999 Odisha Super Cyclone and the 2001 Gujarat Earthquake.
(D) The 2018 Kerala Floods.

198. Consider the following key elements of disaster financial management:
I. Cash flow management
II. Debt monitoring
III. Project and portfolio management
IV. Accurate financial record keeping
V. Medical triage of victims
Which of the above statement(s) is/are correct?

(A) I and V only
(B) I, II, III and IV only
(C) V only
(D) II and IV only

199. The effectiveness of the National Disaster Response Force (NDRF) is largely due to its:
(A) Large size and geographical spread.
(B) Ability to formulate national policy.
(C) Role in financial management and auditing.
(D) Specialized training, state-of-the-art equipment, and rapid deployability.

200. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Instrument)
P. Disaster Management Act
Q. National Policy on Disaster Management
R. Sendai Framework
S. National Disaster Management Plan
List II: (Year of Adoption/Enactment)
1. 2009
2. 2015
3. 2005
4. 2019 (latest version)
(A) P-3, Q-1, R-2, S-4
(B) P-1, Q-3, R-4, S-2
(C) P-3, Q-2, R-1, S-4
(D) P-2, Q-4, R-3, S-1

201. Which Sustainable Development Goal (SDG) target is most directly related to the Sendai Framework's goal of reducing disaster mortality and economic loss?
(A) SDG Target 4.7: Education for sustainable development.
(B) SDG Target 6.1: Universal access to safe drinking water.
(C) SDG Target 11.5: Significantly reduce deaths, affected people, and economic losses from disasters.
(D) SDG Target 16.1: Significantly reduce all forms of violence.

202. The term "Project and Portfolio Management" in disaster financial management refers to the oversight of which type of projects?
(A) A mix of long-term recovery, reconstruction, and mitigation projects.
(B) Short-term relief distribution projects only.
(C) Scientific research projects on climate change.
(D) Private construction projects unrelated to the disaster.

203. Consider the following statements regarding the legal scope of the Disaster Management Act, 2005:
Statement I : The Disaster Management Act, 2005 focuses exclusively on natural disasters.
Statement II : The Act's definition of "disaster" includes calamities arising from both natural or man-made causes.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is false, but Statement II is true.
(D) Statement I is true, but Statement II is false.

204. "Performing financial analysis" on a proposed disaster mitigation project, such as building a sea wall, would primarily involve:
(A) Assessing its political popularity.
(B) Comparing its long-term benefits in terms of losses avoided versus its upfront construction and maintenance costs.
(C) Counting the number of workers required to build it.
(D) Checking if the design is aesthetically pleasing.

205. The command and control structure of the National Disaster Response Force (NDRF) is vested with:
(A) The State Chief Secretary.
(B) The District Collector.
(C) The Director General of the NDRF.
(D) A designated UN official.

206. Arrange the following international agreements/ strategies in the correct chronological sequence of their adoption:
1. Yokohama Strategy
2. Sendai Framework for DRR
3. Sustainable Development Goals (SDGs)
4. Hyogo Framework for Action
Choose the correct answer from the options given below:
(A) 1, 4, 2, 3
(B) 4, 1, 2, 3
(C) 1, 2, 3, 4

Downloaded from www.pdf.tube

(D) 3, 2, 1, 4

207. Which of the following is a FALSE statement regarding the institutional arrangements for disaster management in India?
(A) The DDMA functions under the direct command of the NDMA, bypassing the state level.
(B) The NDMA is the apex body for disaster management.
(C) The SDMA is responsible for drawing up the state disaster management plan.
(D) The NDRF is a specialized force for disaster response.

208. A key element of post-disaster financial management is the process of 'expense reimbursement'. This typically involves a lower-level government entity:
(A) Loaning money to a higher-level government entity.
(B) Seeking repayment from a higher-level government entity for approved disaster-related expenses.
(C) Reimbursing individual citizens for all their losses.
(D) Donating funds to an international charity.

209. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Disaster Management Act, 2005, mandates the preparation of disaster management plans at national, state, and district levels.
Reason (R) : This multi-level planning is designed to create a disjointed and uncoordinated response system.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

210. In financial management for humanitarian response, speed is critical. However, it must be balanced with accountability. Which mechanism helps achieve this balance?
(A) Using pre-approved vendor lists and simplified emergency procurement procedures.
(B) Bypassing all documentation.
(C) Distributing funds randomly without verification.
(D) Halting all spending until a full audit is complete.

211. Which international framework strongly promoted the concept of "mainstreaming" disaster risk reduction into development planning?
(A) The Yokohama Strategy
(B) The International Health Regulations
(C) The Hyogo Framework for Action
(D) The Tampere Convention

212. The National Policy on Disaster Management 2009 is built upon the premise that:
(A) Disasters cannot be managed, only responded to.
(B) The responsibility of disaster management lies solely with the military.
(C) Every disaster is a unique, isolated event with no lessons to be learned.
(D) Disasters offer development opportunities that can be utilized through careful planning.

213. Consider the following statements about disaster financial systems:
I. A robust Disaster Financial Accounting System is essential for transparency.
II. Disaster Financial Assistance Programs are sources of funding for recovery.
III. Supply chain management is unrelated to financial management.
IV. Cash flow management is a minor concern during an emergency.
Which of the above statement(s) is/are correct?
(A) I and II only
(B) III and IV only
(C) I, II and III only
(D) I and IV only

NODIA

214. The Disaster Management Act, 2005, came into force after receiving the assent of the President of India on:
(A) 26 January 2005
(B) 23 December 2005
(C) 15 August 2005

application process.
(B) The amount of media coverage the disaster receives.
(C) The political affiliation of the affected region.
(D) The clarity of eligibility criteria and the efficiency of the disbursement mechanism.

248. The National Disaster Management Plan (NDMP) is a plan for the whole country. Who is responsible for approving it?
(A) The National Disaster Management Authority (NDMA)
(B) The Parliament of India
(C) The Supreme Court of India
(D) The United Nations Office for Disaster Risk Reduction (UNDRR)

249. Which of these activities is part of "Cash flow management" in a disaster scenario?
(A) Conducting a long-term economic impact assessment.
(B) Designing new building codes.
(C) Forecasting immediate and short-term cash needs for relief operations.
(D) Writing the final disaster report for historical archives.

250. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Authority/Force)
P. National Disaster Management Authority (NDMA)
Q. State Disaster Management Authority (SDMA)
R. District Disaster Management Authority (DDMA)
S. National Disaster Response Force (NDRF)
List II: (Level of Operation)
1. District
2. National (Specialist Response)
3. National (Policy and Coordination)
4. State
(A) P-3, Q-4, R-1, S-2
(B) P-2, Q-4, R-1, S-3
(C) P-3, Q-1, R-4, S-2
(D) P-4, Q-3, R-2, S-1

Direction : Please read the following source carefully.

The Disaster Management Act, 2005, represents a paradigm shift in India's approach to disaster management, moving from a primarily post-disaster, relief-centric model to a proactive, holistic, and integrated one. This landmark legislation provides a comprehensive legal and institutional framework for managing disasters across the country. A key provision of the Act is the establishment of a three-tiered institutional structure, comprising the National Disaster Management Authority (NDMA) chaired by the Prime Minister, State Disaster Management Authorities (SDMAs) chaired by the respective Chief Ministers, and District Disaster Management Authorities (DDMAs) chaired by the District Collector or equivalent. This hierarchical yet decentralized structure is designed to ensure a coordinated and effective response at all administrative levels. The Act mandates the creation of national, state, and district disaster management plans, which are crucial for systematic preparedness and mitigation efforts. It also provides for the constitution of specialized forces like the National Disaster Response Force (NDRF) for professional response and the establishment of dedicated funds for financing disaster mitigation and response activities. The overarching goal is to build a safer and more disaster-resilient India through a continuous and integrated process of planning, organizing, coordinating, and implementing measures.
Based on the above source, attempt the following five questions.

251. What fundamental shift in approach to disaster management is institutionalized by the Disaster Management Act, 2005?
(A) A shift from a national-level focus to a state-centric model.
(B) A transition from a relief-centric approach to a proactive and holistic one.
(C) A move from a civilian-led system to a military-coordinated framework.
(D) A change from a multi-agency approach to a single-authority system.

252. According to the Disaster Management Act, 2005, who chairs the State Disaster Management Authority (SDMA)?
(A) The Chief Minister of the respective state.
(B) The Prime Minister of India.

Click Here to Buy book on Amazon

and 'Special Category States' for the State Disaster Response Fund (SDRF)?
(A) Special category states receive a higher percentage of their contribution from the Centre (90%).
(B) There is no difference; the contribution ratio is the same for all states.
(C) General category states receive a higher percentage of their contribution from the Centre.
(D) Special category states are fully funded by the World Bank.

224. The relationship between the National Disaster Management Authority (NDMA) and the National Executive Committee (NEC) is best described as:
(A) The National Executive Committee is superior to the NDMA.
(B) The National Executive Committee acts as the executive wing to implement the policies and plans laid down by the NDMA.
(C) They are two independent and unrelated bodies.
(D) The NDMA is responsible for finance, and the NEC is responsible for operations.

225. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Sendai Framework emphasizes the need to invest in disaster risk reduction for resilience.
Reason (R) : Investing in disaster risk reduction is more cost-effective in the long run than spending on post-disaster response and recovery.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

226. Which of the following is a responsibility of the District Disaster Management Authority (DDMA)?
(A) To ensure that the State Disaster Management Plan is implemented in the district.
(B) To formulate the National Disaster Management Policy.
(C) To deploy Indian military forces for overseas missions.
(D) To approve the budget for the National Disaster Response Force.

227. Match the items in List I with those in List II and select the correct answer using the options given below:
List I: (Framework Priority)
P. Hyogo Framework for Action Priority 1
Q. Hyogo Framework for Action Priority 3
R. Sendai Framework Priority 1
S. Sendai Framework Priority 3
List II: (Description)
1. Understanding disaster risk.
2. Use knowledge, innovation, and education to build a culture of safety and resilience.
3. Make disaster risk reduction a national and local priority with a strong institutional basis.
4. Investing in disaster risk reduction for resilience.
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-2, R-1, S-4
(C) P-2, Q-4, R-1, S-3
(D) P-4, Q-1, R-2, S-3

228. Financial management for humanitarian response requires robust internal controls primarily to:
(A) Slow down the relief process.
(B) Comply with international trade law.
(C) Make the accounting process more complicated.
(D) Prevent fraud and corruption and ensure aid reaches those in need.

229. Consider the statement: "The National Disaster Management Plan, 2019, aims to make India disaster resilient and significantly reduce the loss of life, livelihoods and assets." This vision is directly aligned with the goals of which framework?
(A) The Yokohama Strategy only.
(B) The Kyoto Protocol.
(C) The Hyogo Framework and the Sendai Framework.
(D) The G-20 economic agenda.

Downloaded from www.pdf.tube

(C) Strengthening disaster risk governance to manage disaster risk.
(D) Understanding disaster risk in all its dimensions.

259. The passage suggests a close alignment between the Sendai Framework and the Sustainable Development Goals (SDGs) because:
(A) the SDGs were a prerequisite for the creation of the Sendai Framework.
(B) both frameworks were primarily focused on economic development.
(C) effective disaster risk management is considered essential for achieving sustainable development.
(D) the Sendai Framework was designed to finance the implementation of the SDGs.

260. Which international instrument laid the foundational principles that influenced the subsequent Hyogo and Sendai frameworks?
(A) The Yokohama Strategy.
(B) The Paris Agreement on climate change.
(C) The Hyogo Framework for Action itself.
(D) The UN Charter.

Direction : Please read the following source carefully.

India's disaster management policy landscape is structured around a foundational policy document and its operational counterpart. The National Policy on Disaster Management (NPDM), formulated in 2009, laid down the overarching principles and vision for a holistic, proactive, multi-disaster-oriented, and technology-driven strategy. It aimed to foster a culture of prevention, preparedness, and mitigation to minimize the adverse impacts of hazards. This policy serves as the guiding philosophy for all disaster management efforts in the country. To operationalize this vision, the National Disaster Management Plan (NDMP) was developed, with a significant version released in 2019. The NDMP 2019 is a dynamic document that translates the policy's vision into an actionable framework. Critically, it is the first national plan to align with the priorities and targets of the Sendai Framework for Disaster Risk Reduction 2015-2030. It provides a clear roadmap for all levels of government—national, state, and district—detailing their roles and responsibilities across the full spectrum of disaster management, from prevention and mitigation to response and recovery. The NDMP 2019 also specifies frameworks for coordination among various agencies and departments, ensuring a synchronized and efficient approach to disaster management, thereby bridging the gap between policy and practice. The framework extends down to State Disaster Management Plans (SDMPs) and District Disaster Management Plans (DDMPs), which are expected to be prepared in consonance with the national plan.

Based on the above source, attempt the following five questions.

261. What is the primary relationship between the National Policy on Disaster Management (NPDM) 2009 and the National Disaster Management Plan (NDMP) 2019?
(A) The NPDM 2009 is an updated version of the NDMP 2019.
(B) The NPDM 2009 focuses only on response, while the NDMP 2019 focuses only on mitigation.
(C) The NDMP 2019 was created to replace the outdated principles of the NPDM 2009.
(D) The NDMP 2019 is the operational document that implements the vision of the NPDM 2009.

262. A significant feature of the National Disaster Management Plan (NDMP) 2019 is its alignment with which international framework?
(A) The Hyogo Framework for Action.
(B) The Sendai Framework for Disaster Risk Reduction.
(C) The Yokohama Strategy.
(D) The UN Millennium Development Goals.

263. According to the text, the National Policy on Disaster Management (NPDM) 2009 promotes a strategy that is:
(A) reactive, incident-specific, and centrally controlled.
(B) focused exclusively on post-disaster reconstruction.
(C) proactive, multi-disaster-oriented, and technology-driven.
(D) managed primarily by non-governmental organizations.

NODIA

238. Given below are two statements, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The Disaster Management Act, 2005 provides for protection of action taken in good faith by its functionaries.
Reason (R) : This provision is meant to enable officials to take swift and necessary decisions during a crisis without the fear of undue litigation.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

239. The National Disaster Management Plan (NDMP) 2019 is a:
(A) A dynamic document that requires periodic updates.
(B) Legally binding treaty.
(C) A historical account of past disasters.
(D) A plan applicable only to the city of New Delhi.

240. The supply chain for disaster relief differs from a commercial supply chain primarily in its:
(A) Goal of profit maximization.
(B) Extreme urgency, uncertain demand, and challenging operational environment.
(C) Predictability and stability.
(D) Lack of need for warehousing and transportation.

241. Which of the following is NOT an objective of the National Policy on Disaster Management, 2009?
(A) Promoting a culture of prevention and preparedness.
(B) Centralizing all disaster management powers and revoking the authority of states.
(C) Encouraging mitigation measures based on state-of-the-art technology.
(D) Mainstreaming disaster risk reduction into the development process.

242. The process of disaster financial management begins:
(A) Well before a disaster strikes, with mitigation funding, preparedness budgeting, and financial planning.
(B) Only after a disaster has struck.
(C) Only when international aid arrives.
(D) After the recovery phase is fully completed.

243. The Hyogo Framework for Action identified 'underlying risk factors' as a key area to address. Which of the following is an example of such a factor?
(A) A well-rehearsed evacuation plan.
(B) Strong building codes that are enforced.
(C) Poverty and unplanned urban development in hazardous areas.
(D) An effective early warning system.

244. If a state's State Disaster Response Fund (SDRF) is exhausted during a severe disaster, it can request assistance from which central fund for response activities?
(A) National Disaster Mitigation Fund (NDMF)
(B) Consolidated Fund of India
(C) Prime Minister's Citizen Assistance and Relief in Emergency Situations (PM CARES) Fund
(D) National Disaster Response Fund (NDRF)

245. The Sendai Framework for Disaster Risk Reduction is a successor to which framework?
(A) The Yokohama Strategy
(B) The Millennium Development Goals
(C) The Hyogo Framework for Action
(D) The Paris Agreement on Climate Change

246. Consider the following statements regarding the leadership of local disaster authorities:
Statement I : The District Collector is the chairperson of the District Disaster Management Authority.
Statement II : The Chief Minister of the state is the chairperson of the State Disaster Management Authority.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

247. The effectiveness of disaster financial assistance programs often depends on:
(A) The complexity and slowness of their

Click Here to Buy book on Amazon

230. A key competency for a disaster financial manager is "Knowledge of Procurement and Contracting Practices". A practical application of this would be:
(A) Drafting a new national law on disasters.
(B) Effectively and transparently managing tenders for debris removal services.
(C) Leading a search and rescue team.
(D) Providing psychological first aid to survivors.

231. The Disaster Management Act, 2005 establishes a three-tier structure. What is the correct sequence from top to bottom?
(A) NDMA, DDMA, SDMA
(B) SDMA, NDMA, DDMA
(C) DDMA, SDMA, NDMA
(D) NDMA, SDMA, DDMA

232. Consider the following statements regarding disaster financial management strategies:
Statement I : Debt monitoring involves tracking loans taken by the government for reconstruction to ensure they are managed sustainably.
Statement II : Risk avoidance is a proactive strategy that might involve choosing not to invest in a highly vulnerable area.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

233. Which of the following international frameworks was the first to set specific, measurable global targets for disaster risk reduction?
(A) Yokohama Strategy
(B) Hyogo Framework for Action
(C) Sendai Framework for Disaster Risk Reduction
(D) Rio Declaration on Environment and Development

234. In the event of a disaster, the District Disaster Management Authority (DDMA) can take measures for the removal of debris or the demolition of dangerous buildings. The expenses for this would be considered part of:
(A) Response and recovery operations
(B) Mitigation activities
(C) Preparedness drills
(D) Long-term climate research

235. The "Build Back Better" principle, endorsed in the Sendai Framework, means that post-disaster recovery should:
(A) Rebuild everything exactly as it was before the disaster.
(B) Only focus on economic recovery and ignore social and environmental aspects.
(C) Be outsourced entirely to international companies.
(D) Use the opportunity to rebuild infrastructure and systems to a higher standard of resilience.

236. Consider the following statements regarding the functions of key disaster management bodies in India:
I. The National Disaster Management Authority (NDMA) lays down policies and guidelines.
II. The State Disaster Management Authority (SDMA) lays down the state-specific policy and plan.
III. The District Disaster Management Authority (DDMA) acts as the planning and coordinating body at the district level.
IV. The National Disaster Response Force (NDRF) is responsible for specialized response and rescue.
V. The National Executive Committee (NEC) is responsible for drafting the national budget.
Which of the above statement(s) is/are correct?
(A) I, II, III, and IV only
(B) I, II, and V only
(C) III, IV, and V only
(D) I, II, III, IV and V

237. The 'sustainability' of disaster financial management implies:
(A) Spending all available funds in the first week of a disaster.
(B) Relying exclusively on a single source of funding.
(C) Ensuring that financial strategies do not create long-term debt burdens or fiscal instability for the government.
(D) Keeping financial records secret from the public.

NODIA

(C) The District Collector.
(D) The Union Home Minister.

253. Which of the following is a direct institutional consequence mandated by the Disaster Management Act, 2005?
(A) The creation of international disaster response teams.
(B) The privatization of all relief and rescue operations.
(C) The establishment of the NDMA, SDMA, and DDMA.
(D) The dissolution of all pre-existing civil defence organizations.

254. The text implies that the creation of disaster management plans at national, state, and district levels primarily serves to:
(A) allocate international aid effectively.
(B) document historical disaster events.
(C) manage the financial auditing process.
(D) ensure systematic preparedness and mitigation.

255. The overarching goal of the Disaster Management Act, 2005, as described in the passage, is to achieve:
(A) complete prevention of all natural hazards.
(B) financial self-sufficiency for all disaster-affected districts.
(C) a safer and more disaster-resilient nation through an integrated process.
(D) international leadership in disaster response technology.

Direction : Please read the following source carefully.

The international community has progressively developed a series of frameworks to guide global efforts in disaster risk reduction (DRR). The Hyogo Framework for Action (HFA) 2005-2015 was a significant milestone, establishing five Priorities for Action aimed at building the resilience of nations and communities to disasters. It emphasized making DRR a national and local priority, identifying and monitoring risks, using knowledge for safety, reducing underlying risk factors, and strengthening disaster preparedness. Building upon the HFA, the Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted, marking a refined and more comprehensive approach. The Sendai Framework has four distinct Priorities for Action: understanding disaster risk; strengthening disaster risk governance to manage disaster risk; investing in disaster risk reduction for resilience; and enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation, and reconstruction. Unlike its predecessor, the Sendai Framework places a stronger emphasis on the management of disaster risk rather than just the management of disasters. It also introduced seven global targets to measure progress, closely aligning DRR with the broader 2030 Agenda for Sustainable Development, recognizing that effective disaster risk management is crucial for achieving the Sustainable Development Goals (SDGs). The Yokohama Strategy, an earlier initiative, laid the foundational principles that influenced both the Hyogo and Sendai frameworks.

Based on the above source, attempt the following five questions.

256. Which framework introduced the concept of "Build Back Better" as a key component of its priorities for action?
(A) The Yokohama Strategy.
(B) The Sendai Framework for DRR.
(C) The Hyogo Framework for Action.
(D) The Sustainable Development Goals.

257. A key difference between the Sendai Framework and the Hyogo Framework for Action is that the Sendai Framework places a greater emphasis on:
(A) the exclusive role of national governments in disaster response.
(B) post-disaster relief and financial aid distribution.
(C) the historical documentation of past disaster events.
(D) the management of disaster risk rather than just managing disasters.

258. Which of the following was one of the five Priorities for Action under the Hyogo Framework for Action (HFA)?
(A) Using knowledge, innovation, and education to build a culture of safety and resilience.
(B) Investing in disaster risk reduction for resilience.

Downloaded from www.pdf.tube

(B) approve the National Plan for disaster management.
(C) directly command the National Disaster Response Force.
(D) coordinate the implementation of the State Plan.

Direction : Please read the following source carefully.

Constituted under the Disaster Management Act of 2005, the National Disaster Response Force (NDRF) is a specialized, multi-skilled force dedicated to disaster response in India. It is a unique force globally, singularly committed to providing a professional and swift response to natural and man-made disasters. The NDRF is composed of battalions sourced from various Central Armed Police Forces, including the Border Security Force (BSF), Central Reserve Police Force (CRPF), and Indo-Tibetan Border Police (ITBP), among others. These personnel are rigorously trained in a wide range of disaster response skills, such as search and rescue, medical first aid, and management of chemical, biological, radiological, and nuclear (CBRN) emergencies. While its primary mandate is to conduct response and relief operations during a disaster, the NDRF's role is not purely reactive. It is also actively involved in proactive, pre-disaster activities. These include continuous capacity building of state disaster response forces (SDRFs) and other stakeholders, conducting community awareness programs, and carrying out mock drills and exercises to enhance preparedness at various levels. This dual focus on both response and preparedness makes the NDRF a critical component of India's disaster management institutional framework, bridging the gap between planning and on-the-ground execution.

Based on the above source, attempt the following five questions.

271. What is the primary mandate of the National Disaster Response Force (NDRF)?
(A) To formulate national disaster management policies.
(B) To manage the financial aspects of disaster mitigation.
(C) To provide specialized response during disaster situations.
(D) To conduct long-term reconstruction projects.

272. The personnel of the NDRF are sourced from which of the following?
(A) The Indian Army, Navy, and Air Force.
(B) Various Central Armed Police Forces.
(C) State police and fire services.
(D) Non-governmental organizations and volunteers.

273. Besides its primary response role, the NDRF is also actively involved in which proactive activity?
(A) Funding disaster mitigation projects.
(B) Formulating international treaties on disasters.
(C) Auditing the disaster management funds of states.
(D) Conducting community awareness and capacity building programs.

274. The text highlights that the NDRF is trained to handle specialized emergencies, including:
(A) chemical, biological, radiological, and nuclear (CBRN) incidents.
(B) economic recessions and financial crises.
(C) political and diplomatic negotiations.
(D) long-term agricultural and drought management.

NODIA

275. The establishment of the NDRF was provisioned under which legal instrument?
(A) The National Policy on Disaster Management, 2009.
(B) The Sendai Framework for DRR.
(C) The Disaster Management Act, 2005.
(D) The Indian Penal Code.

Direction : Please read the following source carefully.

Effective Disaster Financial Management (DFM) is a critical pillar of a comprehensive disaster risk management strategy, encompassing activities before, during, and after a disaster event. A fundamental component of DFM is the establishment of a dedicated Disaster Financial Management Team. The composition of this team is crucial, as it must possess the expertise to navigate the complex financial landscape of a crisis. Key functions within DFM include robust cash flow management to ensure liquidity for immediate

264. The passage indicates that the NDMP 2019 provides a roadmap for which levels of government?
(A) Only the national and international levels.
(B) Only the state and municipal levels.
(C) Only the national level and its various ministries.
(D) The national, state, and district levels.

265. The purpose of State Disaster Management Plans (SDMPs) and District Disaster Management Plans (DDMPs) is to:
(A) be prepared in consonance with the National Disaster Management Plan.
(B) operate independently of the national plan.
(C) focus solely on financial aspects of disasters.
(D) replace the need for a national-level policy.

Direction : Please read the following source carefully.

The Disaster Management Act of 2005 established a robust, three-tiered institutional arrangement to ensure a streamlined and decentralized approach to disaster management in India. At the apex of this structure is the National Disaster Management Authority (NDMA), which is mandated to lay down the policies, plans, and guidelines for disaster management for ensuring a timely and effective response to disasters. It operates at the national level and is responsible for approving the National Plan and the plans of various central ministries and departments. Below the NDMA, at the state level, is the State Disaster Management Authority (SDMA). The SDMA is tasked with laying down the state's disaster management policy, approving the State Plan, and coordinating the implementation of both the State Plan and the National Plan. The final tier of this institutional framework is the District Disaster Management Authority (DDMA), which functions at the district level. The DDMA acts as the planning, coordinating, and implementing body for disaster management at the district level and is responsible for preparing the District Disaster Management Plan. This hierarchical structure is founded on the principle of subsidiarity, ensuring that planning and implementation are carried out at the most appropriate administrative level, thereby facilitating localized and context-specific disaster management strategies while maintaining national oversight and coordination.

Based on the above source, attempt the following five questions.

266. Which body is responsible for laying down the overarching policies and guidelines for disaster management at the national level in India?
(A) The State Disaster Management Authority (SDMA).
(B) The National Disaster Management Authority (NDMA).
(C) The District Disaster Management Authority (DDMA).
(D) The National Disaster Response Force (NDRF).

267. The role of the District Disaster Management Authority (DDMA) is primarily focused on:
(A) approving the national disaster management budget.
(B) acting as the planning and implementing body at the district level.
(C) coordinating international disaster response efforts.
(D) formulating national disaster management policy.

268. The three-tiered institutional arrangement of NDMA, SDMA, and DDMA is best described as:
(A) a hierarchical structure designed for decentralized implementation.
(B) a competitive framework with overlapping jurisdictions.
(C) a completely independent and disconnected system.
(D) a temporary arrangement activated only during disasters.

269. The principle of subsidiarity, as implied in the passage, suggests that disaster management planning should be:
(A) entirely centralized at the national level.
(B) outsourced to international expert agencies.
(C) carried out at the most appropriate and localized administrative level.
(D) conducted exclusively by the private sector.

270. According to the text, a key responsibility of the State Disaster Management Authority (SDMA) is to:
(A) prepare the District Disaster Management Plan.

Click Here to Buy book on Amazon

(D) 1 April 2006

215. The 'all-hazards' approach adopted by the National Policy on Disaster Management 2009 implies:
(A) Preparing for only the most frequent hazard in a region.
(B) Focusing exclusively on terrorist attacks.
(C) Ignoring slow-onset disasters like drought.
(D) Preparing for a wide range of hazards, including natural and man-made.

216. Which of the following represents the role of a State Executive Committee (SEC) in disaster management?
(A) It is the executive arm of the SDMA, responsible for implementing its decisions and preparing the state plan.
(B) It is a judicial body that adjudicates disputes related to disaster relief.
(C) It is a committee of the state legislature focused on funding.
(D) It directly commands all police and paramilitary forces in the state.

217. The Sendai Framework for Disaster Risk Reduction is considered more comprehensive than the Hyogo Framework because it includes:
(A) A shorter timeline of five years.
(B) A reduced role for local governments and communities.
(C) A focus on both natural and man-made hazards, and their interaction with environmental, technological, and biological risks.
(D) The exclusion of health-related risks from its scope.

218. Financial management activities during a disaster include "maintaining accurate financial records". A primary reason for this is to:
(A) Support requests for reimbursement and demonstrate accountability to stakeholders.
(B) Provide data for academic researchers in the future.
(C) Keep relief workers busy with paperwork.
(D) Create a complex system that is difficult to understand.

219. One of the major international legal instruments related to disasters is the Tampere Convention. What does it primarily deal with?
(A) The financing of post-disaster reconstruction.
(B) The international trade of hazardous materials.
(C) The protection of cultural property during armed conflict.
(D) The provision of telecommunication resources for disaster mitigation and relief operations.

220. Consider the following statements regarding the legal framework in India:
I. The Disaster Management Act, 2005 is the central legislation.
II. The Environment Protection Act, 1986 has rules for managing hazardous chemicals.
III. The Factories Act, 1948 includes provisions for on-site and off-site emergency plans.
IV. The Indian Penal Code has no provisions applicable to disaster-related negligence.
Which of the above statement(s) is/are correct?
(A) I and IV only
(B) II and III only
(C) I, II, and III only
(D) I, II, III, and IV

NODIA

221. Which of the following is a primary objective of the National Disaster Management Plan (NDMP)?
(A) To make India disaster-proof by 2030.
(B) To secure funding from the World Bank for all disaster management activities.
(C) To provide a framework for all government and non-government agencies to work in a coordinated manner.
(D) To create a new specialized force for every district.

222. The term 'disaster' under the Disaster Management Act, 2005, is defined based on the:
(A) Cause of the event only.
(B) Geographical location of the event only.
(C) Time of day the event occurs.
(D) Scale of the event's consequences, such as loss of life, suffering, and damage.

223. What is the key difference in funding contributions between 'General Category States'

response needs and long-term debt monitoring to maintain fiscal stability. A significant pre-disaster function is risk avoidance, which, in a financial context, involves making strategic investments and policy decisions to reduce potential future economic losses from disasters. This could include, for example, enforcing building codes to avoid reconstruction costs or investing in early warning systems to mitigate economic disruption. Proactive financial planning, such as establishing contingency funds and exploring risk transfer mechanisms like insurance, is central to this concept. The goal of these core DFM activities is to enhance a government's or an organization's financial resilience, enabling it to absorb the economic shock of a disaster and recover more swiftly without compromising long-term development objectives.

Based on the above source, attempt the following five questions.

276. Within the context of Disaster Financial Management, what does "cash flow management" primarily address?
(A) The availability of liquid funds for immediate response.
(B) The long-term monitoring of national debt.
(C) The auditing of past disaster expenditures.
(D) The process of applying for international grants.

277. The concept of "risk avoidance" in a financial management context for disasters involves:
(A) avoiding all areas prone to natural hazards.
(B) refusing to provide any financial aid after a disaster.
(C) transferring all financial responsibilities to the central government.
(D) strategic investments and policies to reduce future economic losses.

278. According to the passage, the primary purpose of a dedicated Disaster Financial Management Team is to:
(A) lead search and rescue operations.
(B) manage the complex financial aspects of a crisis.
(C) provide medical assistance to victims.
(D) conduct media briefings during a disaster.

279. The passage suggests that effective Disaster Financial Management contributes to:
(A) increasing the frequency of natural disasters.
(B) guaranteeing complete protection from all disaster impacts.
(C) enhancing a government's financial resilience to absorb shocks.
(D) replacing the need for physical disaster preparedness.

280. Which of the following is presented as a crucial pre-disaster function of DFM?
(A) Damage assessment and expense reimbursement.
(B) Emergency procurement and supply chain management.
(C) Post-disaster needs assessment.
(D) Debt monitoring and risk avoidance.

NODIA

Direction : Please read the following source carefully.

The procedural aspects of Disaster Financial Management (DFM) are critical for ensuring accountability, transparency, and the efficient use of resources in the aftermath of a disaster. A key initial step is disaster assessment, which involves a systematic evaluation of the damage to infrastructure, property, and the economy. This assessment forms the basis for claiming and allocating funds. Closely linked to this is the process of expense reimbursement, which pertains to recovering costs incurred for undertaking emergency protective measures and permanent repair work. For this to be successful, meticulous record-keeping is non-negotiable. This is where the principles of project and portfolio management become essential. Effective DFM requires performing detailed financial analysis of recovery projects and, most importantly, maintaining accurate financial records and documents. This disciplined approach to documentation is not merely an administrative task; it is a fundamental requirement in preparation for audits, which are inevitable to verify the legitimate use of public and donor funds. By integrating financial analysis and rigorous record-keeping into the management of recovery projects, authorities can ensure that every expenditure is justified, tracked, and auditable, thereby strengthening financial governance and public trust during the recovery phase.

Based on the above source, attempt the following

conduct rescue operations. The allocation of these funds is based on the recommendations of the Finance Commission to maintain fiscal balance.

15. (A) 3, 2, 1
International frameworks for disaster risk reduction have evolved chronologically to reflect changing global priorities. The Yokohama Strategy and Plan of Action was adopted first in 1994, focusing on disaster prevention and preparedness. This was followed by the Hyogo Framework for Action in 2005, which aimed to build the resilience of nations. The Sendai Framework for Disaster Risk Reduction, adopted in 2015, is the most current global agreement. This timeline shows the shift toward managing comprehensive disaster risks.

16. (B) The Chief Minister of the State
According to the Disaster Management Act of 2005, the State Disaster Management Authority is the apex body for disaster management at the provincial level. The Chief Minister of the state serves as the ex-officio Chairperson of this authority. This leadership ensures that disaster management receives the highest level of political support and administrative coordination. The SDMA is responsible for laying down state policies and approving the State Disaster Management Plan to ensure the safety of its citizens.

17. (B) The sequence of activities to procure, store, and deliver relief supplies to affected populations.
Supply chain management in a disaster context refers to the complex sequence of logistics activities required to support affected populations. This includes the procurement of essential items like food, water, and medicine, followed by their storage and efficient delivery to the disaster site. Effective supply chain management is critical for timely response and ensures that resources reach those in need without delay. It requires coordination between government agencies, suppliers, and transport providers under extremely challenging and urgent conditions.

18. (C) Statement I is true, but Statement II is false.
Sustainable Development Goal 11 focuses on making cities and human settlements inclusive, safe, and resilient. It specifically includes targets to reduce the number of deaths and people affected by disasters. Contrary to the idea that disaster risk reduction is only linked to environmental goals, it is deeply connected to social and economic objectives. Disasters often exacerbate poverty and disrupt health and education systems. Therefore, managing disaster risk is essential for achieving overall sustainable development and protecting vulnerable communities.

19. (C) National and State levels
The Disaster Management Act of 2005 provides for the establishment of Disaster Mitigation Funds specifically at the National and State levels. These funds are distinct from response funds and are dedicated to projects aimed at reducing the risk and impact of future disasters. By institutionalizing these funds, the Act ensures a proactive approach to disaster management. Mitigation activities, such as building stronger infrastructure or improving land use, are funded through these accounts to enhance long-term resilience across the country.

20. (D) State Disaster Response Fund
When a state government faces a notified disaster like a severe cyclone, it primarily utilizes the State Disaster Response Fund for immediate relief expenses. This fund is readily available to the state to meet the costs of providing food, clothing, medical care, and temporary shelter to victims. While national funds like the NDRF can supplement these resources during severe calamities, the SDRF serves as the first line of financial response at the provincial level for emergency operations.

21. (C) Conducting search and rescue operations.
Disaster financial management focuses on the economic and administrative aspects of handling a crisis. Primary activities include performing financial analysis for disaster-related projects, maintaining accurate records for audits, and managing cash flow for emergency responses. These tasks ensure that funds are used transparently and efficiently. While conducting search and rescue operations is a critical part of disaster response, it is a field operational activity carried out by specialized forces rather than a core function of financial management teams.

22. (A) Both A and R are true and R is the correct explanation of A.

Downloaded from www.pdf.tube

victims.
(C) sourcing, procurement, storage, and distribution of goods.
(D) diplomatic negotiations with neighboring countries.

288. The text suggests that emergency procurement procedures must balance the need for speed and flexibility with the need for:
(A) using only local suppliers.
(B) transparency and accountability.
(C) adhering to pre-disaster budget allocations strictly.
(D) political approval for every transaction.

289. A failure in the financial-logistical chain, such as a broken supply line, can directly lead to:
(A) a stronger and more resilient local economy.
(B) an immediate increase in international donations.
(C) improved long-term infrastructure.
(D) delays in delivering life-saving aid.

290. Based on the context provided, which of the following would be an example of specialized contracting practices in a disaster?
(A) A rapid contract for emergency debris removal with clear monitoring terms.
(B) A standard, multi-year government IT service contract.
(C) A long-term research and development grant.
(D) A tender process for building a new government office complex.

Direction : Please read the following source carefully.

A robust framework for disaster financial management requires specialized systems and programs to ensure that funds are tracked, managed, and disbursed effectively. Central to this are Disaster Financial Accounting Systems, which are distinct from routine government accounting. These systems are designed specifically to segregate and track all revenues and expenditures related to a specific disaster event. This allows for clear reporting, facilitates audits, and helps in the preparation of claims for financial assistance from higher levels of government or international donors. Complementing these systems are specific Disaster Financial Management Processes, which outline the workflows, approvals, and controls for financial transactions during a disaster lifecycle. Furthermore, governments establish various Disaster Financial Assistance Programs to channel monetary aid to affected parties. These programs are crucial mechanisms for recovery, providing support to individuals for housing repair, to businesses for economic revitalization, and to local government bodies for infrastructure reconstruction. The design of these programs must be clear on eligibility criteria, application procedures, and disbursement methods to ensure aid reaches the intended beneficiaries in a timely and equitable manner. Together, these specialized accounting systems, management processes, and assistance programs form the operational backbone of financial response and recovery.

Based on the above source, attempt the following five questions.

NODIA

291. What is the primary function of a Disaster Financial Accounting System as described in the passage?
(A) To predict the financial impact of future disasters.
(B) To disburse salaries to all government employees.
(C) To segregate and track revenues and expenditures for a specific disaster.

292. Disaster Financial Assistance Programs are designed primarily to:
(A) channel monetary aid to affected individuals, businesses, and government bodies.
(B) fund the activities of the National Disaster Response Force.
(C) provide loans to unaffected neighboring countries.
(D) finance pre-disaster awareness campaigns exclusively.

293. According to the text, what is a key requirement for the design of effective financial assistance programs?
(A) The programs must be managed exclusively by international agencies.
(B) The aid should be distributed equally among all citizens, regardless of impact.
(C) The funds must be sourced entirely from private donations.
(D) The eligibility criteria and application

long-term economic stability following a major disaster event.

29. (C) Sustainable Development Goals : 2015-2025
The Sustainable Development Goals, adopted by United Nations member states in 2015, are intended to be achieved by the year 2030, not 2025. This fifteen-year timeline aligns with the Sendai Framework for Disaster Risk Reduction. Other international frameworks, such as the Hyogo Framework (2005-2015), the Sendai Framework (2015-2030), and the Yokohama Strategy (1994-2004), have established timelines that reflect the global community's evolving approach to managing risks and promoting sustainable development over several decades.

30. (D) The National Disaster Management Authority (NDMA)
The National Disaster Response Force is a specialized responding body constituted under the Disaster Management Act of 2005. According to the Act, the general superintendence, direction, and control of this force are vested in the National Disaster Management Authority. This ensures that the force's operational activities are closely aligned with national policies and guidelines. The NDMA provides the strategic oversight necessary for the NDRF to maintain its specialized training and equipment for rapid deployment during various national or international crises.

31. (A) Both Statement I and Statement II are true.
Disaster financial accounting systems are specialized mechanisms designed to track, record, and report on the utilization of funds during disaster-related activities. These systems are essential for ensuring transparency and accountability to funding agencies, government bodies, and the general public. By providing clear documentation of how resources were allocated and spent, these systems help prevent fraud and mismanagement. They also facilitate the auditing process, which is necessary for justifying expenditures and securing future financial support for recovery operations.

32. (B) The four priority themes of the Sendai Framework.
India's National Disaster Management Plan is strategically designed to align with the global Sendai Framework for Disaster Risk Reduction 2015-2030. Specifically, it incorporates the framework's four priority themes: understanding disaster risk, strengthening risk governance, investing in resilience, and enhancing preparedness for effective response. By adopting these themes, the national plan ensures that India's disaster management strategies are consistent with international best practices. This alignment helps in achieving the global targets for reducing mortality and economic losses from disasters.

33. (B) Performing a financial analysis to select and oversee a portfolio of long-term recovery projects.
Project and portfolio management in disaster finance involves the systematic oversight of a collection of recovery and mitigation initiatives. This process includes performing financial analyses to select viable projects and monitoring their progress to ensure they remain on budget and achieve desired outcomes. Unlike immediate relief activities like food distribution, this function focuses on long-term reconstruction and risk reduction. By managing these projects as a portfolio, authorities can optimize resource allocation and ensure that various initiatives collectively build overall community resilience.

34. (A) The Chief Secretary of the State
The Disaster Management Act of 2005 provides for a State Executive Committee to assist the State Disaster Management Authority in its functions. This committee is headed by the Chief Secretary of the state, who serves as the ex-officio chairperson. The SEC acts as the coordinating and monitoring body for disaster management at the provincial level. It is responsible for implementing the decisions of the SDMA and preparing the State Disaster Management Plan, ensuring that departmental actions are well-integrated and effective.

35. (C) Establishing a global fund for post-disaster compensation.
The Sendai Framework for Disaster Risk Reduction 2015-2030 identifies four specific Priorities for Action to guide global efforts. These include understanding disaster risk, strengthening risk governance, and investing in risk reduction for resilience. The fourth priority focuses on enhancing preparedness and "Building Back Better" during recovery. Establishing a

Click Here to Buy book on Amazon

(A) At both the Central and State levels.
(B) Only at the District level.
(C) Only at the Central level.
(D) At the Municipal and Panchayat levels only.

www.nodia.in

NODIA

five questions.

281. What is the primary purpose of maintaining accurate financial records and documents in post-disaster financial management?
(A) To prepare for audits and ensure accountability.
(B) To create a historical archive of the disaster event.
(C) To calculate the number of people affected by the disaster.
(D) To serve as a training manual for future responders.

282. The process of "disaster assessment" as described in the passage is fundamental for:
(A) predicting the next disaster event.
(B) forming the basis for claiming and allocating funds.
(C) assigning blame for the disaster's impact.
(D) conducting immediate search and rescue operations.

283. The passage links the principles of project and portfolio management directly to the need for:
(A) deploying international aid workers.
(B) performing financial analysis and maintaining records for recovery projects.
(C) managing media communications during a crisis.
(D) developing new early warning technologies.

284. Expense reimbursement, in the context of DFM, pertains to the recovery of costs for:
(A) emergency protective measures and repair work.
(B) pre-disaster mitigation and awareness campaigns.
(C) the regular salaries of government employees.
(D) long-term economic development plans unrelated to the disaster.

285. The text implies that a disciplined approach to documentation in DFM primarily strengthens:
(A) the speed of initial emergency response.
(B) the physical resilience of new infrastructure.
(C) financial governance and public trust.
(D) the political standing of the ruling party.

Direction : Please read the following source carefully.

The effectiveness of a humanitarian response is heavily reliant on the seamless integration of financial management with logistical operations, particularly supply chain management, procurement, and contracting. In a disaster context, supply chain management extends beyond mere transportation; it involves the sourcing, procurement, storage, and distribution of essential goods and services under immense time pressure and challenging conditions. Knowledge of specialized procurement and contracting practices is therefore indispensable. Standard, peace-time procurement processes are often too slow and rigid for the exigencies of a disaster. Emergency procurement requires procedures that are rapid and flexible, yet still transparent and accountable to prevent fraud and corruption. This involves understanding pre-approved vendor lists, long-term agreements, and the legal frameworks governing emergency acquisitions. Contracting for services, such as debris removal or temporary shelter construction, also requires specific expertise to ensure contracts are clearly defined, fairly priced, and effectively monitored. A failure in any part of this financial-logistical chain—from flawed procurement to a broken supply line—can lead to critical delays in delivering life-saving aid, thereby undermining the entire relief effort. Thus, expertise in these areas is a core competency within disaster financial management.

Based on the above source, attempt the following five questions.

286. Why is a specialized knowledge of procurement and contracting practices considered indispensable in a disaster context?
(A) Because international law mandates the use of specific contractors.
(B) Because it is the only way to secure international funding.
(C) Because all disaster-related goods are produced by a single supplier.
(D) Because standard procedures are often too slow and rigid for emergencies.

287. According to the passage, effective supply chain management in a disaster involves more than just transportation; it also includes:
(A) media management and public relations.
(B) long-term psychological counseling for

Downloaded from www.pdf.tube

on post-disaster relief is not a global target; instead, the framework focuses on reducing underlying risks and investing in resilience to prevent such losses from occurring.

8. (A) Both A and R are true and R is the correct explanation of A.
The Disaster Management Act of 2005 mandates the establishment of dedicated authorities at national, state, and district levels. This multi-tiered institutional system is essential for achieving a holistic and integrated approach to disaster management. By distributing responsibilities across different levels of government, the framework ensures that planning and implementation are grounded in local realities while being supported by national policies. This structure facilitates better coordination, resource mobilization, and specialized response during various emergency situations.

9. (C) Ensure disaster risk reduction is a national priority with an institutional basis.
The Hyogo Framework for Action 2005-2015 was a ten-year plan to make the world safer from natural hazards. Its first Priority for Action was to ensure that disaster risk reduction became a national and local priority with a strong institutional basis for implementation. This required countries to develop policy frameworks, legislation, and community participation mechanisms. By establishing a solid institutional foundation, nations could better integrate risk reduction into their development strategies and response systems.

10. (A) P-2, Q-4, R-1, S-3
Under the Disaster Management Act of 2005, different authorities are chaired by specific high-ranking officials. The National Disaster Management Authority is chaired by the Prime Minister, while the State Disaster Management Authority is headed by the Chief Minister. At the local level, the District Disaster Management Authority is led by the District Collector or Magistrate. The National Disaster Response Force is a specialized responding body headed by a Director General who oversees its operational readiness and deployment.

11. (D) To provide a framework for disaster management activities at the district level.
A District Disaster Management Plan is a comprehensive document prepared by the District Authority to address disaster risks within its jurisdiction. Its primary purpose is to provide a detailed framework for prevention, mitigation, preparedness, and response activities at the local level. It identifies vulnerable areas, resources available, and the specific roles of various departments. By having a localized plan, districts can ensure a more coordinated and efficient response tailored to their unique geographical and social contexts.

12. (A) I and III only
In disaster financial management, maintaining accurate financial records is crucial for ensuring transparency and facilitating post-disaster audits. This practice helps justify expenditures and ensures eligibility for future funding. Proactive financial management also includes risk avoidance strategies, where funding is intentionally directed away from high-risk projects to prevent potential future losses. Managing cash flow is always a significant concern during emergencies, and formal assessments are necessary for handling expense reimbursements for any infrastructure damage.

13. (C) The Sendai Framework for Disaster Risk Reduction
The National Disaster Management Plan, updated in 2019, is the first national-level plan of its kind in India. It is specifically designed to be consistent with the Sendai Framework for Disaster Risk Reduction 2015-2030. The plan incorporates the four priority themes and seven global targets outlined in the international framework. By aligning with these global standards, India aims to substantially reduce disaster risk and losses in lives, livelihoods, health, and economic assets over the coming years.

14. (D) 75% from the Central Government and 25% from the State Government.
The State Disaster Response Fund is the primary fund available to state governments for responding to notified disasters. For general category states, the funding pattern consists of a 75% contribution from the Central Government and a 25% share from the State Government. This financial arrangement ensures that states have immediate resources to provide relief and

NODIA

procedures must be clear.

294. What is the role of Disaster Financial Management Processes?
(A) To conduct the physical assessment of damage on the ground.
(B) To outline the workflows, approvals, and controls for financial transactions.
(C) To provide a historical narrative of past disaster spending.
(D) To directly manage the logistics of the supply chain.

295. The passage suggests that specialized accounting systems are important because they:
(A) prevent disasters from occurring.
(B) facilitate audits and claims for financial assistance.
(C) guarantee that affected businesses will return to profitability.
(D) eliminate the need for any other form of disaster management.

Direction : Please read the following source carefully.

The financial architecture for disaster management in India, as envisaged by the legal framework, includes dedicated funds at both the Central and State levels to ensure the availability of resources for distinct phases of the disaster management cycle. The system is built around two primary types of funds: a Disaster Response Fund and a Disaster Mitigation Fund. The Disaster Response Fund, which exists at both the Central level (as the National Disaster Response Fund - NDRF) and the State level (State Disaster Response Fund - SDRF), is primarily meant for meeting the expenses for emergency response, relief, and immediate rehabilitation. Its use is reactive, triggered by the occurrence of a disaster to provide immediate support to affected populations. In contrast, the Disaster Mitigation Fund, which is also to be established at the national and state levels, serves a proactive purpose. This fund is intended exclusively for financing mitigation activities—projects and measures designed to reduce the risk, severity, or consequences of future disasters. This includes structural measures like constructing flood embankments or retrofitting critical infrastructure, and non-structural measures like enhancing early warning systems. This dual-fund structure reflects the comprehensive approach of the national policy, which gives equal importance to post-disaster relief and pre-disaster risk reduction.

Based on the above source, attempt the following five questions.

296. What is the primary purpose of the Disaster Response Fund at the State and Central levels?
(A) To finance long-term research on disaster prediction.
(B) To fund pre-disaster risk reduction projects.
(C) To pay for the salaries of the disaster management authorities.
(D) To meet expenses for emergency response, relief, and immediate rehabilitation.

297. The Disaster Mitigation Fund is intended to be used for which type of activity?
(A) Projects designed to reduce the risk of future disasters.
(B) Post-disaster reconstruction of private homes.
(C) Providing immediate food and shelter to evacuees.
(D) Financial compensation to disaster victims.

298. The existence of both a Response Fund and a Mitigation Fund reflects an approach that gives importance to:
(A) only post-disaster activities.
(B) both pre-disaster risk reduction and post-disaster relief.
(C) only international disaster law.
(D) a response-centric financial model.

299. Based on the passage, which of the following would be a suitable project to be financed from the Disaster Mitigation Fund?
(A) Distributing emergency relief kits after a cyclone.
(B) Retrofitting hospitals to make them earthquake-resistant.
(C) Operating temporary relief camps for flood victims.
(D) Reimbursing search and rescue teams for operational costs.

300. The passage states that the Disaster Response Fund and the Disaster Mitigation Fund are established at which administrative levels?

Click Here to Buy book on Amazon

The National Disaster Management Plan 2019 incorporates gender-sensitive and child-centric approaches to ensure that the most vulnerable are protected. Disasters often disproportionately affect women, children, and persons with disabilities due to existing social inequalities and specific physical needs. Tailored interventions are required to address these unique vulnerabilities during relief and recovery operations. By integrating these perspectives into national planning, the government aims to achieve more equitable outcomes and ensure that no segment of the population is left behind.

23. (D) Deciding not to fund projects in high-risk zones to prevent future financial losses.
Risk avoidance is a proactive financial strategy in disaster management that involves eliminating potential exposure to hazards. This principle is best illustrated by the decision to withhold funding or permits for developmental projects in high-risk zones, such as floodplains or landslide-prone areas. By preventing construction in these locations, authorities avoid future financial losses and physical damage that would occur during a disaster. This strategy is more cost-effective than investing in mitigation or response after assets have already been built.

24. (A) I, II, IV, and V only
The Hyogo Framework for Action 2005-2015 identified five specific priorities for action to reduce disaster risks globally. These included making disaster risk reduction a national and local priority, using knowledge to build a culture of safety, reducing underlying risk factors, and strengthening preparedness for effective response. While international cooperation is mentioned in the framework, it was not listed as one of the five core "Priorities for Action." The focus was primarily on institutionalizing risk reduction and enhancing local and national resilience.

25. (C) The elected representative of the local authority (Zila Parishad)
The District Disaster Management Authority has a unique leadership structure that combines administrative expertise with local political representation. While the District Collector or Magistrate serves as the Chairperson, the elected representative of the local authority, such as the Chairperson of the Zila Parishad, serves as the co-chairperson. This arrangement ensures that disaster management at the district level is participatory and accountable to the local community. It bridges the gap between government administration and the people's elected representatives.

26. (A) P-2, Q-1, R-3, S-4
Disaster funds in India are categorized by their purpose and level of government. The National Disaster Response Fund is used for emergency response and rehabilitation at the national level, while the State Disaster Response Fund serves a similar purpose at the state level. In contrast, the National and State Disaster Mitigation Funds are reserved exclusively for projects aimed at reducing long-term disaster risks. This clear separation ensures that resources are available for both immediate crises and proactive risk reduction measures.

27. (D) Shifting from a relief-centric approach to a proactive prevention, mitigation, and preparedness-driven model.
The National Policy on Disaster Management 2009 advocates for a major paradigm shift in how India handles calamities. Previously, the focus was largely on providing relief after an event had occurred. The new vision promotes a holistic approach that prioritizes proactive prevention, mitigation, and preparedness. By investing in these areas before a disaster strikes, the policy aims to minimize the loss of life and property. This integrated model is designed to build a more resilient nation through technology-driven strategies.

28. (B) Supervising the loans and grants received by the government for disaster recovery.
In the context of disaster financial management, debt monitoring involves the systematic supervision of financial obligations incurred during the recovery phase. Governments often receive loans or grants from international institutions and national agencies to rebuild infrastructure and restore services. Monitoring these debts ensures that funds are used for their intended purpose and that repayment schedules are managed sustainably. This process is essential for maintaining fiscal discipline and ensuring

Downloaded from www.pdf.tube

ANSWERS

1. (B) A catastrophe, mishap, or grave occurrence in any area, arising from natural or man-made causes, resulting in substantial loss of life.
The Disaster Management Act of 2005 defines a disaster as a catastrophe or grave occurrence in any area. This event can arise from natural or man-made causes and must result in substantial loss of life or human suffering. Additionally, it involves significant damage to property or the environment. Such occurrences are of such a nature or magnitude as to be beyond the coping capacity of the affected area.

2. (A) Both Statement I and Statement II are true.
The Disaster Management Act of 2005 provides a comprehensive legal framework for managing disasters and related incidental matters across India. Its enactment was significantly influenced by the devastating 2004 Indian Ocean Tsunami, which exposed the need for a coordinated national response system. The legislation shifted India's approach from a reactive relief-centric model to a proactive strategy. It established institutional structures at national, state, and district levels to enhance resilience.

3. (C) National Disaster Management Authority (NDMA)
The National Disaster Management Authority is the apex body for disaster management in India, established under the Disaster Management Act of 2005. Chaired by the Prime Minister, it is responsible for laying down policies, plans, and guidelines for disaster management. It ensures a timely and effective response to disasters while coordinating with various ministries and state governments. This authority plays a central role in supervising the national framework for disaster risk reduction.

4. (D) An international strategy for natural disaster reduction.
The Yokohama Strategy and Plan of Action for a Safer World was adopted in 1994 during the International Decade for Natural Disaster Reduction. It emphasized that disaster prevention, mitigation, and preparedness are more effective than mere response operations. This strategy focused on social and economic development to reduce vulnerability. It laid the initial groundwork for subsequent global frameworks by highlighting the importance of community participation and strengthening local capacities for resilience.

5. (C) It focuses exclusively on response and relief operations.
The National Policy on Disaster Management 2009 envisions building a safe and disaster-resilient India through a holistic approach. It emphasizes a paradigm shift from a reactive relief-centric model to a proactive prevention, mitigation, and preparedness-driven strategy. The policy covers all phases of the disaster management cycle rather than focusing exclusively on response. It encourages the integration of disaster risk reduction into developmental planning to ensure long-term sustainability and reduce the impact of future calamities.

6. (B) The Disaster Management Act, 2005
The National Disaster Response Force was constituted under the provisions of the Disaster Management Act of 2005. It serves as a specialized force for responding to threatening disaster situations or actual disasters. The force consists of personnel from various paramilitary organizations who receive specialized training in search and rescue operations. It operates under the general superintendence of the National Disaster Management Authority to provide an effective and expert response during natural and man-made calamities.

7. (D) Substantially increase global government expenditure on post-disaster relief.
The Sendai Framework for Disaster Risk Reduction 2015-2030 outlines seven global targets to measure progress. These include reducing mortality, the number of affected people, and economic losses. It also aims to increase international cooperation and access to multi-hazard early warning systems. Substantially increasing government expenditure specifically

NODIA

global fund for post-disaster compensation is not one of these priorities. Instead, the framework emphasizes reducing risk through proactive measures and governance rather than creating a universal financial compensation mechanism for losses.

36. (C) 2, 3, 1
The Disaster Management Act of 2005 establishes a three-tier institutional structure to manage disasters across India. At the apex level is the National Disaster Management Authority, which provides national policy direction. Below it are the State Disaster Management Authorities, responsible for planning at the provincial level. The District Disaster Management Authorities form the third tier, acting as the primary units for implementation at the grassroots level. This hierarchical order ensures a vertically integrated system for coordinating disaster management activities from top to bottom.

37. (C) National Disaster Response Fund
When a disaster of a severe nature occurs and the resources of a State Government are inadequate to meet the needs of the situation, the National Disaster Response Fund can be accessed. This fund is managed by the Central Government and is intended to supplement the State Disaster Response Fund during major calamities. Upon request from the state, a central team assesses the damage to determine the additional support required. This mechanism ensures that severe disasters receive adequate financial backing for emergency response.

38. (D) I, II, III, and IV
The National Disaster Management Authority is the apex body for disaster management in India, established under the 2005 Act. It consists of a Chairperson and up to nine members. The Prime Minister of India serves as the ex-officio Chairperson, providing the highest level of leadership. The NDMA is responsible for laying down policies, plans, and guidelines to ensure effective disaster management. Its comprehensive role includes coordinating response efforts, laying down standards for relief, and promoting proactive mitigation strategies across the country.

39. (D) Distributing cash without a proper beneficiary identification and verification process.
Effective financial management in humanitarian response is designed to ensure that aid reaches the intended beneficiaries transparently and accountably. Practices such as implementing tracking systems, conducting audits, and establishing clear procurement guidelines are highly effective for this purpose. However, distributing cash without proper identification and verification is the least effective practice as it increases the risk of fraud, duplication, and mismanagement. Without verified beneficiary lists, it is impossible to guarantee that limited resources are provided to those most in need after a disaster.

40. (A) Both A and R are true and R is the correct explanation of A.
The Disaster Management Act of 2005 establishes an integrated framework requiring plans at different levels to be in harmony. State Disaster Management Plans must be consistent with the National Disaster Management Plan to ensure a unified approach to disaster risk reduction and response. This structural consistency prevents duplication of efforts and ensures that national priorities are effectively implemented at the state level. Such alignment is crucial for coordinating resources and specialized personnel across different jurisdictions during large-scale calamities.

41. (C) To manage the financial aspects of disaster prevention, response, and recovery.
A Disaster Financial Management Team plays a critical administrative role in handling the economic side of a crisis. Their primary responsibility is to manage all financial aspects throughout the disaster cycle, including funding for prevention, budgeting for response operations, and overseeing recovery expenses. This involves coordinating various funding sources, ensuring accurate record-keeping for audits, and managing cash flows for immediate relief. While other teams handle search and rescue or medical aid, this team ensures that the necessary financial resources are available and used accountably.

42. (A) The Environment (Protection) Act, 1986 and its rules
While the Disaster Management Act of 2005 provides a general framework, the Environment (Protection) Act of 1986 and its specific rules

Click Here to Buy book on Amazon

Collector. The NDRF is headed by a Director General. Correct matching of these roles is essential for understanding the hierarchical and administrative command structure of disaster management in the country.

56. (A) Both A and R are true and R is the correct explanation of A.
The Sendai Framework emphasizes the concept of "Building Back Better" during the recovery, rehabilitation, and reconstruction phase. This principle recognizes that the period following a disaster offers a unique opportunity to improve infrastructure and social systems. Instead of simply restoring the pre-disaster state, "Building Back Better" focuses on integrating disaster risk reduction measures into new construction and planning. This proactive approach ensures that the reconstructed environment is more resilient to future hazards, thereby reducing long-term vulnerability and preventing the recurrence of similar losses.

57. (C) The State Executive Committee
According to the Disaster Management Act of 2005, the responsibility for preparing the State Disaster Management Plan lies with the State Executive Committee. The SEC, chaired by the Chief Secretary of the state, acts as the executive arm of the State Disaster Management Authority. Once the plan is drafted, it is submitted to the SDMA for approval. This process ensures that the state plan is technically sound and coordinated across various departments while receiving the necessary political endorsement for its implementation and funding.

58. (A) National Crisis Management Committee (NCMC)
The Disaster Management Act of 2005 specifically established the National Disaster Management Authority, State Disaster Management Authorities, and District Disaster Management Authorities. It also provided for the National Executive Committee. The National Crisis Management Committee, however, existed prior to the Act and is headed by the Cabinet Secretary. While the NCMC remains involved in high-level coordination during major crises, it is not an institutional body created under the specific provisions of the 2005 Act, which focused on creating a new, integrated statutory framework.

59. (D) Achieving the SDGs is impossible without effectively managing disaster risk, which affects poverty, health, education, and infrastructure.
There is a profound connection between the Sustainable Development Goals and disaster risk reduction. Disasters have the potential to wipe out decades of development progress by destroying infrastructure and pushing vulnerable populations into poverty. Therefore, achieving goals related to health, education, and economic growth is fundamentally impossible without managing disaster risks. DRR is an essential cross-cutting issue that protects developmental gains. The Sendai Framework and the SDGs are complementary, as both aim to build a resilient world where progress is not constantly derailed by calamities.

60. (C) I, II, and III only
Disaster financial management encompasses several key administrative activities. These include damage assessment and needs analysis to determine funding requirements, and the management of cash flow to ensure liquidity for emergency operations. It also involves the procurement of essential relief materials and services through transparent procedures. While the formulation of international disaster law is a vital legal process, it is typically carried out by international bodies and diplomatic missions rather than being a standard activity of a disaster financial management team focused on operational planning and execution.

61. (C) The process by which public entities receive repayment for costs incurred during response.
Expense reimbursement pertaining to damage refers to the formal process where public entities, such as local or state governments, seek repayment for costs they incurred during disaster operations. This includes expenses for emergency protective measures, debris removal, and the repair of public infrastructure. In disaster financial management, these entities must provide detailed documentation of their expenditures to higher-level government agencies or insurance programs. This mechanism ensures that local authorities can recover financially and continue providing essential services after a major disaster event has strained their budgets.

NODIA

ensuring specialized response and sustainable reconstruction after events.

49. (B) Sandbagging to protect a critical facility from imminent flooding.
Emergency protective measures are immediate actions taken to save lives and protect property or public health during an actual or imminent disaster. Sandbagging a critical facility during a flood is a classic example of such a measure. In disaster financial management, public entities can often seek reimbursement for the costs associated with these urgent activities. Unlike long-term mitigation projects or research, these measures are temporary and response-oriented, designed to address an immediate threat and reduce the overall damage caused by a specific disaster event.

50. (B) I, II, III, and IV only
The Disaster Management Act of 2005 introduced several key features to India's administrative system. It established the NDMA, SDMAs, and DDMAs as specialized authorities and constituted the National Disaster Response Force. The Act also created specific response and mitigation funds at both national and state levels. Additionally, it provided for legal penalties to deter obstruction and false claims. While the Act is powerful, it does not supersede all other environmental and safety legislations; rather, it complements them to provide a comprehensive disaster management framework.

51. (C) A response and relief-centric approach to a proactive and holistic approach.
The National Policy on Disaster Management 2009 emphasizes a paradigm shift in India's strategy for handling calamities. For many decades, the primary focus was on reactive relief and response operations after a disaster occurred. The policy advocates for a shift toward a proactive and holistic approach that prioritizes prevention, mitigation, and preparedness. By addressing risks before they manifest as disasters, the government aims to reduce the loss of lives and economic assets, thereby promoting sustainable development and national resilience.

52. (D) The Union Home Secretary
Under the Disaster Management Act of 2005, the National Executive Committee is constituted to assist the National Disaster Management Authority in its duties. The Union Home Secretary serves as the ex-officio chairperson of the NEC. This committee acts as the executive wing of the NDMA, responsible for coordinating the implementation of national plans and policies across various ministries. The leadership of the Home Secretary ensures that administrative actions are synchronized at the highest levels of the central government for efficient disaster management.

53. (C) Maintaining transparent financial records and allowing for audits.
Accountability is a fundamental principle in the financial management of humanitarian response. It is best achieved by maintaining detailed and transparent financial records for all expenditures. These records allow internal and external auditors to verify that funds were used appropriately for their intended humanitarian purposes. This practice builds trust with donors and the public. Relying on verbal reports or limiting information disclosure hinders transparency and increases the risk of mismanagement, which can ultimately lead to a loss of funding for critical relief operations.

54. (A) 2, 4, 1, 3
The evolution of disaster management in India followed several significant events. The Gujarat Earthquake (Bhuj) occurred in 2001, followed by the Indian Ocean Tsunami in late 2004. These disasters highlighted the need for robust legislation, leading to the enactment of the Disaster Management Act in 2005. Subsequently, the National Policy on Disaster Management was adopted in 2009 to provide a strategic vision. This chronological sequence shows how major crises acted as catalysts for developing the country's comprehensive legal and policy frameworks for disaster risk reduction.

55. (D) NDMA - Headed by the Prime Minister
In the institutional framework established by the Disaster Management Act 2005, specific leaders head different authorities. The National Disaster Management Authority is headed by the Prime Minister of India. At the provincial level, the State Disaster Management Authority is chaired by the Chief Minister, while the District Disaster Management Authority is led by the District

Downloaded from www.pdf.tube

social, economic, and environmental assets. The framework focused on achieving this through five Priorities for Action, including risk assessment, education, and strengthening preparedness. By setting this clear outcome, the HFA galvanized international efforts to move beyond emergency response toward systematic risk reduction and sustainable development globally.

69. (C) Evaluating the cost-effectiveness and financial viability of recovery and mitigation projects.
Performing financial analysis is a core technical function within disaster financial management. It involves evaluating proposed recovery and mitigation projects to determine their cost-effectiveness and overall financial viability. Analysts compare the upfront costs of a project, such as building a flood levee, against the potential long-term benefits of avoided losses. This process helps decision-makers prioritize projects that offer the greatest risk reduction for the available budget. Such analysis ensures that public funds are invested strategically to maximize community resilience and ensure sustainable recovery outcomes.

70. (B) P-4, Q-3, R-1, S-2
Different international frameworks have unique primary focuses reflecting the evolution of disaster management. The Yokohama Strategy provided early guidelines for prevention and preparedness. The Hyogo Framework for Action focused on building the resilience of nations and communities. The Sendai Framework for Disaster Risk Reduction shifted the emphasis toward comprehensive risk management and building resilience against various hazards. Finally, the Sustainable Development Goals highlight the critical connection between poverty, development, and disaster risk, emphasizing that one cannot be addressed effectively without considering the others in an integrated manner.

71. (D) The State Disaster Management Authority (SDMA)
According to the Disaster Management Act of 2005, the District Disaster Management Authority is responsible for preparing the District Disaster Management Plan. However, for this plan to be formally adopted and integrated into the broader state-level strategy, it must be approved by the State Disaster Management Authority. This approval process ensures that the district plan is consistent with state policies and guidelines. It also facilitates coordination between different levels of government, ensuring that the district receives the necessary support and resources for its planned activities.

72. (A) Segregate and track costs by disaster event, project, and funding source.
A key component of a robust disaster financial accounting system is its ability to segregate and track costs meticulously. This means the system must be able to categorize every expenditure by the specific disaster event, the individual project it belongs to, and the source of the funding used. Such detailed tracking is essential for transparency and accountability, as it allows for precise reporting to donors and government agencies. It also facilitates the auditing process and ensures that funds are being utilized exactly as intended for recovery and mitigation.

73. (C) It was a non-binding instrument with a lack of measurable targets.
While the Hyogo Framework for Action was a landmark in disaster risk reduction, it faced criticism for being a non-binding instrument that lacked specific, measurable targets to track progress effectively. The Sendai Framework for Disaster Risk Reduction 2015-2030 sought to address this by introducing seven global targets. These targets provide a clear metric for measuring reductions in mortality, affected people, and economic losses. By having quantifiable goals, the international community can better hold nations accountable and objectively assess the success of disaster risk reduction strategies globally.

74. (A) Both A and R are true and R is the correct explanation of A.
The Disaster Management Act of 2005 mandated the creation of the National Disaster Response Force as a dedicated, specialized force for disaster response. This decision was based on past experiences which showed that ad-hoc arrangements were often insufficient for specialized rescue operations. A professionally trained and equipped force like the NDRF is far more effective in handling complex scenarios such as chemical leaks or building collapses. By institutionalizing this specialist force, the Act ensured that India has a permanent and expert

NODIA

62. (D) The International Decade for Natural Disaster Reduction (1990-1999)
The Yokohama Strategy and Plan of Action for a Safer World was a major outcome of the International Decade for Natural Disaster Reduction, which spanned the 1990s. Adopted at the first World Conference on Natural Disaster Reduction in 1994, it represented a global shift toward recognizing that disaster reduction is an essential part of sustainable development. The strategy called for increased international cooperation and a focus on socio-economic vulnerability. This initiative laid the conceptual foundation for all subsequent international frameworks, including the Hyogo and Sendai frameworks.

63. (A) It can be used for funding long-term mitigation projects.
The National Disaster Response Fund is a specialized fund managed by the Central Government for meeting expenses related to emergency response, relief, and rehabilitation. It is primarily financed through a cess called the National Calamity Contingent Duty. While individuals and institutions can contribute to it, the fund is specifically intended for post-disaster operations. It cannot be used for long-term mitigation projects, as those are funded through the National Disaster Mitigation Fund. This clear distinction ensures that resources are always available for immediate, life-saving emergency response activities.

64. (B) Conduct a rapid but thorough financial assessment of the damages and immediate needs.
In the aftermath of a major disaster, a financial management team must prioritize obtaining accurate information to guide their actions. The first essential step is to conduct a rapid but thorough financial assessment of the damages and immediate needs. This assessment provides the data required to justify funding requests, allocate resources efficiently, and begin the procurement process for essential services. Taking action without a damage estimate or waiting indefinitely for central announcements can lead to delays in critical relief and inefficient use of limited financial resources.

65. (D) I, II, III, IV and V
The National Policy on Disaster Management 2009 provides a comprehensive framework for the entire disaster management cycle in India. It covers prevention and mitigation to reduce risks, as well as preparedness to ensure readiness. The policy also addresses response and recovery operations following an event. Furthermore, it incorporates modern challenges like climate change adaptation and emphasizes the importance of international cooperation. By addressing all these areas, the policy ensures an integrated and holistic approach to building national resilience against various types of calamities.

66. (A) The Central Government
According to the Disaster Management Act of 2005 and established administrative practices, the Central Government has the power to declare a disaster as being of a "severe nature." This classification allows for the mobilization of national-level resources, including the National Disaster Response Fund and specialized assistance from central agencies. While the state government manages the primary response, this formal declaration by the Centre enables it to step in with significant financial and technical support to assist the affected state in coping with the massive scale of the calamity.

67. (A) Both Statement I and Statement II are true.
The Disaster Management Act of 2005 includes specific provisions for civil and criminal liabilities to ensure compliance during crises. Penalties are established for obstructing officials in their duties, making false claims for relief, or misusing funds and materials. These legal measures are designed to ensure that government orders for disaster management are strictly followed and that scarce relief resources reach genuine victims. By creating a system of accountability and punishment, the Act aims to prevent corruption and maintain order during highly stressful and chaotic disaster situations.

68. (D) The substantial reduction of disaster losses, including lives and socioeconomic assets.
The Hyogo Framework for Action 2005-2015 was a ten-year plan designed to build the resilience of nations and communities to disasters. Its primary expected outcome was the substantial reduction of disaster losses in terms of human lives as well as

Click Here to Buy book on Amazon

Under the Disaster Management Act of 2005, the National Executive Committee is constituted to assist the National Disaster Management Authority in the performance of its functions. The NEC acts as the executive committee of the NDMA and is responsible for coordinating the implementation of national plans across various government departments. It also has powers to prepare the National Plan and monitor its execution. By acting as the operational and administrative arm of the NDMA, the NEC ensures that high-level policies are translated into coordinated actions on the ground.

82. (A) That sufficient liquid funds are available to meet immediate and ongoing expenses during a disaster.
In the context of disaster finance, cash flow management is the critical process of ensuring that sufficient liquid funds are available when needed. During a disaster, expenses for emergency procurement, payroll for responders, and relief supplies are immediate and often unpredictable. Effective cash flow management involves forecasting these needs and ensuring that money is accessible to meet both immediate and ongoing operational costs. Without proper liquidity management, response efforts can be severely delayed, even if the government has significant long-term assets or budget allocations elsewhere.

83. (B) 3, 2, 4, 1
Post-disaster financial management follows a logical sequence to ensure accountability and resource recovery. The process typically begins with a damage assessment and expense estimation to determine the scale of financial need. This is followed by the disbursement of funds for immediate emergency protective measures. Once operations stabilize, the entity must submit formal claims for expense reimbursement to higher-level authorities or insurance programs. The final step is the preparation for audits, where all documented records are reviewed to verify that the funds were used appropriately and legally.

84. (D) Ensuring that all new development projects are assessed for disaster risk and include mitigation measures.
Mainstreaming disaster risk reduction into the developmental planning process involves a fundamental shift in how new projects are conceived and executed. Rather than treating disaster management as a separate activity, the National Policy on Disaster Management 2009 promotes its integration into all sectors. This implies that all new developmental initiatives, such as building roads or schools, must undergo a disaster risk assessment. Appropriate mitigation measures must then be incorporated into the project design to ensure that development does not inadvertently increase vulnerability or create new risks.

85. (C) To deploy the National Disaster Response Force (NDRF) for international missions.
The District Disaster Management Authority has several critical functions at the local level, including preparing the district plan and ensuring that national and state guidelines are followed. It also identifies buildings for relief centers and coordinates response efforts during a crisis. However, the deployment of the National Disaster Response Force for international missions is a matter of national policy and diplomacy, which falls under the jurisdiction of the Central Government and the NDMA. The DDMA's authority is strictly limited to managing disaster-related activities within its specific district.

NODIA

86. (A) Both A and R are true and R is the correct explanation of A.
The Hyogo Framework for Action 2005-2015 was a landmark agreement that successfully increased international and national commitments to disaster risk reduction. Prior to the HFA, the global approach to disasters was predominantly reactive, focusing heavily on providing aid and relief after an event had occurred. The HFA helped shift this paradigm by emphasizing the need for proactive risk reduction strategies. This global commitment encouraged countries to develop institutional frameworks and policies that prioritize reducing vulnerability and building resilience, rather than just waiting for disasters to happen.

87. (D) It has an expanded scope that includes natural, technological, and biological hazards.
A key principle of the Sendai Framework for Disaster Risk Reduction 2015-2030 is its significantly expanded scope compared to earlier

capability for rapid deployment during various emergencies.

75. (D) All phases of the disaster management cycle.
The National Disaster Management Plan 2019 is a comprehensive document that provides a framework for all phases of the disaster management cycle. This includes proactive measures like prevention and mitigation to reduce risks, as well as preparedness for potential events. It also covers the reactive phases of response and recovery to handle the aftermath of a disaster. By addressing the entire cycle, the NDMP ensures a holistic approach that integrates risk reduction with effective emergency management, aiming to build a disaster-resilient India through coordinated efforts.

76. (B) Balancing the need for speed and flexibility with the requirements of financial control and accountability.
Financial management for humanitarian response is uniquely challenging because it must operate in high-pressure environments. The primary challenge lies in balancing the urgent need for speed and flexibility to save lives with the rigid requirements for financial control and accountability. Relief operations require quick spending and local procurement, yet every expense must be documented and justified for donors and auditors. Overcoming this challenge requires specialized systems and skilled professionals who can navigate expedited procedures without compromising the transparency and integrity of the overall humanitarian mission.

77. (C) It includes seven global targets to measure progress.
A key feature that distinguishes the Sendai Framework for Disaster Risk Reduction from the earlier Hyogo Framework is the introduction of seven global targets. These targets were designed to provide a measurable way to assess progress in reducing disaster risks and losses by 2030. They focus on quantifiable metrics such as reducing global disaster mortality, the number of affected people, and direct economic loss. By including these targets, the Sendai Framework moves from a purely conceptual approach to a more results-oriented and accountable global strategy for disaster risk reduction.

78. (D) It is chaired by the Prime Minister and has a Vice-Chairperson and other members not exceeding nine.
The National Disaster Management Authority is the apex body for disaster management in India, established under the 2005 Act. It has a specific composition designed to ensure high-level leadership and expert guidance. The Prime Minister of India serves as the ex-officio Chairperson. In addition to the Chairperson, the NDMA includes a Vice-Chairperson and other members, with the total number of members not exceeding nine. this permanent structure ensures that the authority can provide consistent policy direction and oversight for disaster management activities nationwide.

79. (A) Established government or international programs that provide grants or loans for disaster recovery.
Disaster Financial Assistance Programs are structured mechanisms through which governments or international organizations provide financial support for recovery efforts. These programs typically offer grants or low-interest loans to public entities, businesses, or individuals to help them repair or replace assets damaged by a disaster. Accessing these funds usually requires a formal application process and a detailed assessment of damages. These programs are essential for facilitating long-term economic recovery and ensuring that affected communities can rebuild their infrastructure and livelihoods following a major calamity.

80. (C) I, II, and III only
The Sendai Framework for Disaster Risk Reduction 2015-2030 is a 15-year international agreement that is voluntary and non-binding. It recognizes that while the State has the primary role in reducing disaster risk, the responsibility must be shared with other stakeholders. A significant feature is the introduction of seven global targets to measure progress toward reducing losses. Importantly, the framework applies to all countries regardless of their development status, as disasters affect both developed and developing nations, requiring a universal commitment to building global resilience.

81. (B) To assist the National Authority in its functions and act as its executive committee.

NODIA

This proactive approach aims to reduce future disaster risks and ensure that communities are better prepared to withstand and recover from subsequent events.

94. (D) Cause: Efficient procurement and logistics; Effect: Timely and targeted delivery of essential relief supplies.
Effective supply chain management in disaster response is based on a clear cause-and-effect relationship. When procurement and logistics systems are efficient and well-coordinated, the direct effect is the timely and targeted delivery of essential relief supplies to affected populations. Delays in acquiring items or failures in the transportation network can lead to shortages of food, medicine, and water, potentially worsening the crisis. Therefore, investing in robust supply chain mechanisms is critical for ensuring that humanitarian aid reaches the right people at the right time during an emergency.

95. (A) The Factories Act, 1948
In addition to the Disaster Management Act of 2005, other specialized legislations play a vital role in preventing calamities. The Factories Act of 1948 is one such critical law, as it deals specifically with the health, safety, and welfare of workers in factories. It mandates the implementation of safety measures to prevent industrial accidents, which could otherwise lead to major disasters. By regulating the industrial working environment and ensuring the safety of workers, this Act contributes significantly to reducing the risk of technological and chemical disasters in industrial settings.

96. (B) Conducting day-to-day relief distribution at the site of a disaster.
The National Disaster Management Authority is primarily a policy-making and coordinating body at the national level. Its functions include laying down policies, approving the National Plan, and providing guidelines for various ministries. While the NDMA oversees the overall disaster management framework, it is not responsible for the day-to-day relief distribution at a disaster site. This operational task is carried out by local authorities, district administrations, and NGOs. The NDMA's role is to provide the high-level strategic direction and support necessary for these local actions to be effective.

97. (B) 90% Central share and 10% State share.
The funding pattern for the State Disaster Response Fund is designed to provide greater financial assistance to states with unique geographical and economic challenges. For special category states, which include the Himalayan and North-Eastern states, the Central Government contributes 90% of the fund, while the State Government provides only a 10% share. This is higher than the 75% central share provided to general category states. This arrangement ensures that these vulnerable states have sufficient resources to manage disasters despite having more limited local fiscal capacities.

98. (A) Disaster prevention, mitigation, and preparedness are better than disaster response alone.
A core principle of the Yokohama Strategy and Plan of Action, adopted in 1994, is the recognition that proactive measures are superior to reactive response. The strategy explicitly stated that disaster prevention, mitigation, and preparedness are better than disaster response alone. It called for a shift in global focus toward reducing vulnerability and building resilience through social and economic development. This principle has since become the cornerstone of modern disaster management, influencing the development of both the Hyogo and Sendai frameworks and guiding national policies worldwide.

99. (C) District Disaster Management Plan.
Urban Local Bodies are required to develop their own disaster management plans as part of the broader administrative structure. To be effective, these local plans must be integrated with and consistent with the District Disaster Management Plan. This integration ensures that the city's efforts are aligned with the district's overall strategy, resource allocation, and communication networks. Since disasters do not respect municipal boundaries, this coordination is essential for a unified and effective response. The DDMP provides the overall framework within which local bodies must operate during a crisis.

100. (B) I, II, III, and IV only
Disaster management planning in India is structured across three levels of government.

Downloaded from www.pdf.tube

strategies. It applies to the risk of small-scale and large-scale disasters caused by natural or man-made hazards. This includes not only geological and weather-related events but also technological and biological hazards, such as industrial accidents or pandemics. By acknowledging the complex interaction between different types of risks, the Sendai Framework promotes a more comprehensive and multi-hazard approach to managing disaster risks and building global resilience.

88. (A) Both Statement I and Statement II are true.
The Disaster Management Act of 2005 establishes distinct funds to address different aspects of a crisis. The Disaster Response Fund is specifically utilized for meeting expenses related to emergency response, immediate relief, and rehabilitation after a disaster has occurred. In contrast, the Disaster Mitigation Fund is reserved for financing projects aimed at reducing the long-term risk and severity of future disasters. This clear separation ensures that resources are available for both immediate life-saving operations and proactive, long-term investments in resilience and risk reduction across the country.

89. (A) P-4, Q-1, R-2, S-3
The Disaster Management Act of 2005 is organized into various sections that define specific terms and establish institutional bodies. Section 2(d) provides the legal definition of 'disaster,' which is the foundation of the Act. Section 14 mandates the establishment of the State Disaster Management Authority, while Section 25 deals with the constitution of the District Disaster Management Authority. Section 46 focuses on the creation of the National Disaster Response Fund. Understanding these specific legal provisions is essential for comprehending the statutory basis of India's disaster management framework.

90. (A) To ensure transparency and eligibility for reimbursement from other government levels or donors.
Maintaining accurate financial records is a fundamental requirement in disaster financial management. This practice is crucial for demonstrating transparency in the use of public and donor funds. In many cases, local or state entities are only eligible for reimbursement of their disaster-related expenses if they can provide detailed and verifiable documentation of their spending. Accurate records protect officials from accusations of mismanagement and ensure that the auditing process is smooth. Ultimately, good record-keeping facilitates the recovery of costs and maintains the integrity of the disaster response system.

NODIA

91. (B) I, II, III and IV only
The National Disaster Management Plan 2019 provides a comprehensive framework for government agencies at all levels. It covers the four essential stages of disaster management: prevention of new risks, mitigation of existing impacts, effective response during events, and recovery and reconstruction following a disaster. While international diplomacy is a function of the central government, it is not a primary thematic area of the NDMP itself. The plan's focus is on building domestic resilience and coordinating the technical and administrative activities necessary to protect lives and livelihoods across the country.

92. (B) Local authorities, district authorities, and the people's representatives.
The preparation of a State Disaster Management Plan is a collaborative process led by the State Executive Committee. To ensure the plan is practical and addresses local needs, the committee must consult with local authorities, district authorities, and the people's representatives. This bottom-up consultation ensures that the plan reflects the actual vulnerabilities and resource capacities of various regions within the state. By including diverse stakeholders, the SDMP becomes a more effective and participatory document, fostering better cooperation and ownership during both planning and implementation phases of disaster management.

93. (C) Priority 4: Enhancing disaster preparedness for effective response.
The concept of "Build Back Better" is a core component of Priority 4 of the Sendai Framework for Disaster Risk Reduction. This priority focuses on enhancing disaster preparedness for effective response and integrating risk reduction into recovery, rehabilitation, and reconstruction. "Building Back Better" recognizes that the aftermath of a disaster provides a critical opportunity to rebuild infrastructure and systems more resiliently than they were before.

deal directly with industrial hazards. These regulations, such as the Manufacture, Storage, and Import of Hazardous Chemical Rules, are designed to prevent chemical disasters by setting safety standards for industries. They mandate the preparation of on-site and off-site emergency plans and regulate the handling of hazardous substances. This legal instrument is fundamental for managing technological risks and protecting the environment from industrial accidents.

43. (D) It acts as the district-level planning and implementing body for disaster management.
The District Disaster Management Authority serves as the primary unit for planning, coordinating, and implementing disaster management activities at the local level. According to the 2005 Act, the DDMA identifies vulnerable areas, prepares the district plan, and ensures that guidelines from national and state authorities are followed. It coordinates the actions of different departments and local bodies during a crisis. Because the district is the front line of administration, the DDMA's role is crucial for delivering immediate relief and executing local-level mitigation strategies.

44. (B) SDG 11: Sustainable Cities and Communities
Sustainable Development Goal 11 focuses on making human settlements safe, resilient, and sustainable. It explicitly includes Target 11.5, which aims to significantly reduce the number of deaths and people affected by disasters. The goal also emphasizes reducing direct economic losses relative to global gross domestic product, with a particular focus on protecting the poor and people in vulnerable situations. By highlighting disaster impact within this goal, the international community recognizes that sustainable urban development is impossible without effective disaster risk reduction.

45. (C) A detailed assessment of damages and a formal application process.
Requesting financial assistance from national or international disaster programs is a rigorous process that requires clear documentation. Public entities must provide a detailed assessment of damages, including an estimate of the costs required for repair or replacement of infrastructure. This assessment must be submitted through a formal application process defined by the funding agency. Such requirements ensure that funds are allocated based on actual needs and that the disbursement is transparent and subject to future audits, maintaining accountability throughout the recovery phase.

46. (D) The World Conference on Disaster Reduction in Kobe, Hyogo, 2005.
The Hyogo Framework for Action 2005-2015 was adopted during the World Conference on Disaster Reduction held in Kobe, Hyogo, Japan, in January 2005. This conference took place shortly after the 2004 Indian Ocean Tsunami, which heightened global awareness of disaster risks. The framework provided a comprehensive ten-year plan to build the resilience of nations and communities. It marked a significant milestone in international cooperation, shifting the focus from purely reactive emergency response to a more proactive and systematic approach to disaster risk reduction.

47. (C) Statement I is true, but Statement II is false.
Knowledge of procurement and contracting practices is a vital competency for disaster financial management professionals to ensure that resources are acquired legally and efficiently. During a disaster, procurement processes are typically not suspended entirely. Instead, emergency procedures are activated to allow for faster acquisition of life-saving supplies while still maintaining a degree of transparency and accountability. Complete suspension of rules would lead to significant risks of fraud and mismanagement. Therefore, professional knowledge is required to navigate these expedited but still regulated administrative pathways.

48. (B) P-2, Q-4, R-1, S-3
The Sendai Framework for Disaster Risk Reduction 2015-2030 is structured around four Priorities for Action. Priority 1 is Understanding disaster risk, while Priority 2 focuses on Strengthening disaster risk governance. Priority 3 emphasizes Investing in disaster risk reduction for resilience. Priority 4 highlights Enhancing disaster preparedness for effective response and to "Build Back Better" during recovery. This sequence provides a logical approach from initially assessing risks to creating strong governance, funding resilience, and finally

Click Here to Buy book on Amazon

The National Executive Committee prepares the National Plan, the State Executive Committee prepares the State Plan, and the District Authority prepares the District Plan. A key principle is that all plans must be consistent with the guidelines and plans from the levels above to ensure a coordinated national approach. While the Prime Minister heads the NDMA, they do not personally draft district-level plans; those are the responsibility of the District Disaster Management Authority.

101. (C) National Disaster Management Authority (NDMA)
The National Institute of Disaster Management is a statutory body established under the Disaster Management Act of 2005. It operates under the administrative control of the National Disaster Management Authority. The NIDM serves as a premier institute for capacity building, training, and research in the field of disaster management. By working closely with the NDMA, it ensures that its training programs and research activities are aligned with national policies and contribute to strengthening the institutional capabilities of various stakeholders across the country.

102. (A) Both A and R are true and R is the correct explanation of A.
The Disaster Management Act of 2005 provides a legal framework for declaring a "disaster" or a situation of a "severe nature," but it intentionally does not use the term "state of emergency." This distinction is important because the Act operates within existing constitutional provisions. A national emergency is a specific constitutional event proclaimed by the President. The legal framework for disaster management is designed to provide specialized powers for relief and coordination without supplanting or interfering with the high-level constitutional powers related to proclamations of national emergency.

103. (D) They are complementary and mutually reinforcing, as reducing disaster risk is essential for achieving sustainable development.
The Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals are deeply interconnected and mutually reinforcing. Reducing disaster risk is considered an essential prerequisite for achieving sustainable development, as disasters can easily destroy progress made in areas like health, education, and infrastructure. Conversely, achieving the SDGs helps to reduce the underlying factors that contribute to disaster vulnerability, such as poverty and environmental degradation. Both frameworks were adopted in 2015 and work together to build a more resilient and sustainable future for all nations.

104. (A) The Federal Emergency Management Agency (FEMA)'s Public Assistance Program in the USA.
A Disaster Financial Assistance Program is a structured government initiative designed to provide financial aid following a calamity. FEMA's Public Assistance Program in the United States is a prominent example of such a program. It provides grants to state and local governments to help them recover from disasters and rebuild public infrastructure. Unlike informal fundraising or personal loans, these programs have established eligibility criteria, formal application processes, and strict accountability standards. They are critical for ensuring that large-scale recovery efforts are funded and managed systematically after a disaster.

105. (C) Overseeing a range of recovery projects to ensure they are on budget and on schedule.
In the post-disaster phase, project and portfolio management involves the systematic oversight of various recovery initiatives. This primarily focuses on managing a collection of reconstruction and mitigation projects to ensure they are completed on time, within budget, and according to required standards. This function ensures that resources are allocated efficiently across different projects and that the overall recovery goals are being met. It is an administrative and financial role that is essential for coordinating long-term rebuilding efforts and ensuring accountability for the funds spent on infrastructure restoration.

106. (C) P-4, Q-1, R-2, S-3
The Disaster Management Act of 2005 establishes a clear leadership hierarchy for various disaster management bodies. The National Disaster Management Authority is chaired by the Prime Minister, while the National Executive Committee is headed by the Union Home Secretary. At the state level, the State Executive Committee is led by the Chief Secretary of the State. The District Disaster Management Authority is

NODIA

headed by the District Collector or Magistrate. Correct identification of these chairpersons is crucial for understanding the administrative and operational command chain during disaster situations across India.

107. (D) Mandating every country to contribute 1% of its GDP to a global disaster fund.
The Hyogo Framework for Action 2005-2015 identified three strategic goals to build the resilience of nations. These included integrating disaster risk reduction into sustainable development, strengthening institutions for resilience, and systematically incorporating risk reduction into emergency response. While the framework encouraged increased investment in risk reduction, it did not mandate that every country contribute a specific percentage of its GDP to a global fund. The focus was on policy integration and institutional strengthening rather than imposing universal financial contribution requirements on all participating member states.

108. (B) The National Disaster Management Authority (NDMA)
Under the Disaster Management Act of 2005, the National Disaster Management Authority is specifically responsible for laying down guidelines for the minimum standards of relief. These standards cover essential provisions to be made for victims of disasters, including food, drinking water, shelter, and medical cover. This ensures that a baseline of care is maintained across all states and districts during a crisis. By providing these uniform guidelines, the NDMA helps ensure that relief efforts are equitable and address the basic human needs of those affected by various calamities.

109. (A) Both Statement I and Statement II are true.
The national disaster funds established in India serve distinct and complementary purposes. The National Disaster Mitigation Fund is used for financing projects that aim to reduce the risk and severity of future disasters, such as building stronger infrastructure or improving drainage. The National Disaster Response Fund, on the other hand, is utilized for providing immediate relief and response operations after a disaster has occurred. This two-fund system ensures that the government can address both the immediate needs of victims and the long-term goal of building national resilience through risk reduction.

110. (D) The Yokohama Strategy
The Yokohama Strategy and Plan of Action, adopted in 1994, was the first major international instrument to formally recognize the deep link between disaster reduction and sustainable development. It emphasized that social and economic development is impossible without addressing disaster risks and reducing community vulnerability. This landmark recognition laid the groundwork for all subsequent international frameworks, including the Hyogo and Sendai frameworks. By highlighting this connection, the Yokohama Strategy helped integrate disaster risk management into the broader global agenda for environmental protection and sustainable economic growth.

111. (A) Because disaster situations are often chaotic, uncertain, and rapidly evolving.
Financial management for humanitarian response must be highly adaptable because disasters create extremely chaotic and unpredictable environments. Conditions on the ground can change rapidly, with new needs emerging and existing logistics routes being disrupted. Financial systems must be flexible enough to allow for quick decision-making and the reallocation of funds to address urgent priorities while still maintaining essential controls. A rigid or complex system that cannot adapt to these evolving challenges would hinder the speed of aid delivery, potentially leading to increased suffering and loss of life.

112. (B) It incorporates the latest scientific knowledge and changing risk profiles.
The National Disaster Management Plan is required to be reviewed and updated annually to ensure it remains relevant and effective. Regular updates allow the plan to incorporate the latest scientific findings regarding natural and man-made hazards. It also enables the government to address changing risk profiles caused by factors like climate change, urbanization, and population growth. By remaining a dynamic document, the NDMP ensures that national disaster management strategies are based on the best available data and can effectively

Downloaded from www.pdf.tube

protect the country against evolving threats and vulnerabilities.

113. (D) I, II, III, and IV
The Disaster Management Act of 2005 contains several important provisions for its effective implementation. It establishes penalties for obstructing officers or making false claims to prevent the misuse of relief. It also protects officials from legal action for decisions made in "good faith" during crises. Furthermore, it empowers the central government to issue directions to any authority to ensure a coordinated response. These provisions collectively ensure that the disaster management framework has the legal authority and protection necessary to function effectively during the most challenging emergency situations.

114. (A) Relocating a planned critical infrastructure project from a high-risk coastal zone to a safer inland location.
Risk avoidance is a proactive disaster financial management strategy that involves eliminating the potential for a hazard to cause damage. Relocating a planned infrastructure project from a high-risk area to a safer location is a perfect example. By choosing not to build in a vulnerable zone, the government avoids the future costs of disaster damage, response, and reconstruction. This strategy is distinct from mitigation or preparedness, as it seeks to completely avoid the risk rather than just reducing its impact or preparing to respond to it after it occurs.

115. (C) The Governor of the State
The District Disaster Management Authority has several ex-officio members who represent the local administration. These typically include the Chief Executive Officer of the DDMA, the Superintendent of Police, and the Chief Medical Officer of the District. The District Collector serves as the Chairperson. While the Governor is the constitutional head of the state, they are not a member of the district-level authority. The DDMA's composition is designed to bring together the key administrative and technical heads of the district to ensure a coordinated and rapid response to local disasters.

116. (A) Both A and R are true and R is the correct explanation of A.
During a disaster, standard procurement and contracting practices often need to be expedited to save lives. The urgency of providing essential supplies like food and medicine requires a more flexible approach than time-consuming normal procedures. Disaster financial management allows for these expedited processes while still requiring documentation to ensure accountability. This ensures that life-saving resources reach affected populations as quickly as possible. Without such flexibility, administrative delays could lead to preventable losses. Thus, understanding these specialized procedures is a critical competency for disaster management professionals.

117. (C) Epidemic Diseases Act - Managing the spread of disease following a disaster.
The Epidemic Diseases Act is a specialized legislation that is highly relevant during disasters, particularly those that result in public health emergencies or where the spread of disease is a risk after the event. It provides the government with special powers to take measures to prevent the outbreak or spread of dangerous diseases. This complements the Disaster Management Act by providing specific legal tools for health-related response. Other acts, like the Factories Act or Environment Protection Act, also contribute to the overall legal framework for managing different types of risks.

NODIA

118. (B) The Third UN World Conference in Sendai
The Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted at the Third United Nations World Conference on Disaster Risk Reduction, held in Sendai, Japan, in March 2015. This conference marked the culmination of years of international negotiations to create a successor to the Hyogo Framework. The framework set out a new global agenda for reducing disaster risk and building resilience over the next fifteen years. The choice of Sendai as the host city was significant, as the region had recently experienced the devastating 2011 Great East Japan Earthquake and tsunami.

119. (D) Accessing and managing funds for immediate relief, such as setting up shelters and providing first aid.
In the immediate aftermath of a major earthquake, a District Disaster Management

Authority must prioritize life-saving actions. Its financial management team would be most urgently concerned with accessing and managing funds for immediate relief operations. This includes financing the setup of emergency shelters, procuring medical supplies for first aid, and ensuring the delivery of food and water. While long-term reconstruction and detailed audits are important, they are secondary to the immediate financial needs required to support search and rescue and provide essential care for survivors in the first critical hours.

120. (A) The health sector planning for mass casualty management.
Mainstreaming disaster risk reduction into sectoral planning involves integrating risk management into the regular activities of various government departments. A prime example is the health sector preparing for mass casualty management as part of its standard planning process. This ensures that hospitals and emergency services are ready to handle the sudden influx of patients after a disaster. By incorporating DRR, sectors become more resilient and better prepared to fulfill their functions during a crisis, rather than treating disaster management as an external or occasional task that is only addressed after an event.

121. (C) Build a safe and resilient India by developing a proactive and technology-driven strategy.
The National Policy on Disaster Management 2009 envisions building a safe and disaster-resilient India. It aims to achieve this by developing a proactive and technology-driven strategy that prioritizes prevention, mitigation, and preparedness. This vision moves away from a purely reactive relief-centric model toward a holistic approach that incorporates modern scientific knowledge and involves all stakeholders. By focusing on building resilience before a disaster occurs, the policy seeks to minimize the impact of various hazards on lives and property, ultimately contributing to sustainable national development and social security for all citizens.

122. (A) Ensuring value for money, transparency, and speed of delivery.
In disaster financial management, the critical principle for procurement during an emergency is balancing speed with accountability. This means ensuring value for money and transparency while achieving a high speed of delivery for essential goods and services. Emergency procedures allow for faster contracting to meet urgent needs, but they still require clear documentation to prevent fraud. The goal is to get life-saving resources to the site as quickly as possible without wasting public funds. This requires professionals to be well-versed in both standard and expedited procurement practices to handle high-pressure situations effectively.

123. (D) Reducing the risk, impact, or effects of a disaster.
The Disaster Management Act of 2005 defines 'mitigation' as measures aimed at reducing the risk, impact, or effects of a disaster. Unlike response or recovery, which occur after an event, mitigation consists of proactive actions taken before a disaster to minimize potential losses. This can include structural measures like building earthquake-resistant houses or non-structural measures such as improved land-use planning. By investing in mitigation, authorities can significantly decrease the vulnerability of communities and infrastructure, ultimately making them more resilient to future natural and man-made hazards across the country.

124. (C) Statement I is false, but Statement II is true.
The Hyogo Framework for Action 2005-2015 was an international framework that countries committed to, but it was not a legally binding treaty. Similarly, the Sendai Framework for Disaster Risk Reduction 2015-2030 is also a voluntary and non-binding agreement. While these frameworks carry significant political weight and guide national policies, they do not have the force of international law. Nations participate voluntarily because they recognize the shared benefit of reducing disaster risks and building global resilience. The Sendai Framework provides a common set of goals and targets for all countries to strive toward together.

125. (C) The 13th Finance Commission
The establishment of the National Disaster Response Fund and the State Disaster Response Fund was based on the recommendations of the 13th Finance Commission. This commission recognized the need for a more structured and

Click Here to Buy book on Amazon

predictable funding mechanism for disaster response in India. By institutionalizing these funds, the commission ensured that both central and state governments have dedicated resources available for emergency operations. The funding patterns and allocations suggested by the Finance Commission help maintain fiscal discipline while providing the necessary financial support to manage disasters of varying scales across different states.

126. (A) I, II, III and V only
The Disaster Management Act of 2005 specifically mandated the establishment of the National Disaster Management Authority, State Disaster Management Authorities, and District Disaster Management Authorities. It also provided for the creation of the National Disaster Response Force as a specialized body for emergency rescue. The National Crisis Management Committee, however, is a pre-existing body headed by the Cabinet Secretary and was not established under the specific provisions of the 2005 Act. While the NCMC remains an important part of the overall response architecture, the other bodies represent the core institutional structure introduced by the legislation.

127. (A) Substantially reduce disaster damage to critical infrastructure and disruption of basic services.
One of the seven global targets of the Sendai Framework for Disaster Risk Reduction is to substantially reduce disaster damage to critical infrastructure and the disruption of basic services. This target emphasizes the importance of making infrastructure like hospitals, schools, and water systems more resilient. By reducing the physical damage to these essential facilities, communities can recover more quickly and continue to provide vital services during and after a disaster. Achieving this target requires investing in resilient design and proactive maintenance to prevent the failure of critical systems when they are needed most.

128. (B) The Disaster Management Act, 2005
The primary legal instrument governing disaster management at the national level in India is the Disaster Management Act of 2005. This comprehensive legislation established the institutional structure, including the NDMA, and provided for the creation of specialized forces and dedicated funds. It mandates the preparation of plans at various levels and defines the roles and responsibilities of different authorities. By providing a clear legal framework, the Act ensures a coordinated and structured approach to disaster risk reduction and response, replacing the previously fragmented and primarily relief-centric systems used across the country.

129. (B) Operating in environments with damaged infrastructure and weak or non-existent banking systems.
Financial management for humanitarian response faces unique operational challenges that are not typically encountered in corporate settings. One major challenge is operating in environments where infrastructure is severely damaged and local banking systems may have collapsed. This makes it difficult to transfer funds, pay staff, or procure goods through standard electronic channels. In such cases, financial managers must find alternative ways to ensure liquidity and handle transactions safely. These difficult conditions require highly adaptable systems and professionals who can maintain financial control and accountability despite the lack of traditional administrative support.

130. (A) Both A and R are true and R is the correct explanation of A.
The District Disaster Management Authority is a critical link in India's disaster management structure because the district is the primary unit for administrative implementation. Disasters occur locally, and the initial response and relief efforts are always managed at the district and grassroots levels. The DDMA's role in planning and coordinating these local activities ensures that the response is tailored to the specific needs of the community. Because of this proximity to the ground, the district authority is essential for delivering immediate assistance and executing long-term mitigation strategies that directly protect the people.

131. (C) NEC - Chaired by Home Minister
In the institutional framework of the Disaster Management Act 2005, different bodies have specific chairpersons. The National Disaster Management Authority is chaired by the Prime Minister, and the State Disaster Management

Downloaded from www.pdf.tube

management and proper use of public or donor resources.

156. (B) Building earthquake-resistant schools in a seismic zone.
Promoting a 'culture of prevention' means taking proactive steps to reduce risks before a disaster occurs. Building earthquake-resistant schools in a known seismic zone is a clear reflection of this principle. This structural mitigation measure ensures that the building can withstand an earthquake, thereby protecting students and preventing property loss. Unlike reactive relief operations like distributing food after a flood, prevention focuses on addressing vulnerabilities beforehand. By prioritizing such measures, the government aims to minimize the overall impact of hazards, making the community inherently more resilient and reducing the need for emergency response.

157. (D) P-4, Q-3, R-1, S-2
Disaster management involves various financial and logistical mechanisms with specific primary functions. The National Disaster Response Fund is used for immediate relief and response during severe calamities. The State Disaster Mitigation Fund is reserved for funding risk reduction projects at the provincial level. Expense reimbursement is the administrative process that allows public entities to recover costs incurred during disaster operations. Supply chain management involves the efficient sourcing and delivery of relief supplies. Understanding these distinct functions is essential for managing the complex financial and logistical aspects of both immediate disaster response and long-term risk reduction.

158. (D) To appoint the Chairperson of the State Disaster Management Authority.
The National Executive Committee has several important roles under the 2005 Act, including acting as a coordinating body, preparing the National Plan, and providing information to the public. It serves as the executive arm of the NDMA. However, the NEC does not have the power to appoint the Chairperson of the State Disaster Management Authority. According to the Act, the Chief Minister of each state serves as the ex-officio Chairperson of their respective SDMA. This leadership role is determined by the statute itself and is not subject to appointment by the national committee.

159. (A) A whole-of-government approach.
The transition from the Hyogo Framework to the Sendai Framework marked an evolution in how stakeholders are engaged in disaster risk reduction. The Hyogo Framework primarily focused on a "whole-of-government" approach, emphasizing the role of various state agencies. The Sendai Framework, however, progressed to an "all-of-society engagement and partnership" model. This newer approach explicitly recognizes that building resilience requires the active participation of non-governmental actors, including the private sector, civil society, and local communities. This shift reflects the understanding that governments alone cannot manage all disaster risks and that a more inclusive strategy is necessary.

NODIA

160. (B) To ensure the highest level of political and administrative authority is vested in the apex body for effective command, control, and policy direction.
The Disaster Management Act of 2005 makes the Prime Minister the head of the National Disaster Management Authority to ensure that disaster management receives the highest level of political and administrative attention. This leadership structure gives the NDMA the authority necessary to coordinate effectively across all ministries and state governments. By vesting this power in the Prime Minister, the Act ensures that the apex body has the weight needed for decisive policy direction and command during national crises. This high-level leadership is essential for mobilizing national resources and ensuring a unified response to major calamities.

161. (B) Attendance records from a public awareness campaign held five years ago.
In preparation for a post-disaster audit, a financial management team must gather documentation directly related to the disaster-related expenditures. Relevant documents include invoices for relief materials, payroll records for emergency personnel, and contracts for debris removal. These documents provide the evidence needed to verify that funds were spent appropriately and legally. Attendance records from a public awareness campaign held

capacities. Involving the community in the planning process ensures that the strategies are practical, culturally appropriate, and that people know how to respond during a crisis. Community-based disaster management is a core principle of the 2005 Act, recognizing that local people are the first responders and possess valuable traditional knowledge.

138. (A) The National Disaster Management Authority (NDMA)
According to the Disaster Management Act of 2005, the National Disaster Management Authority has the responsibility to ensure that state governments prepare their own disaster management plans. The NDMA provides the necessary guidelines and framework to ensure that these state-level plans are consistent with the National Plan. This oversight role is essential for maintaining a unified national strategy for disaster risk reduction and response. By supervising the planning process, the NDMA helps ensure that all parts of the country have a structured approach to managing disasters and protecting their populations.

139. (D) I, II, III and IV
The National Disaster Response Force is a specialized body constituted for expert response to disaster situations. It operates under the general superintendence of the National Disaster Management Authority. The NDRF is composed of personnel on deputation from various central paramilitary forces who receive specialized training in rescue operations. It is a highly mobile force that can be deployed rapidly to any part of the country or even abroad for international missions. This specialized capability ensures that India has a professional and dedicated force ready to handle complex emergencies and save lives during major calamities.

140. (A) 2, 1, 3
The institutional framework for disaster management in India is organized by geographical jurisdiction from the largest to the smallest units. The National Disaster Management Authority has jurisdiction over the entire country. Below it, the State Disaster Management Authorities are responsible for their respective provinces. The District Disaster Management Authorities operate at the local level within individual districts. This descending order of jurisdiction ensures that policies and plans can be scaled appropriately, with national guidelines being implemented through state-level coordination and localized action at the district and community levels.

141. (C) Proactive investment in risk reduction measures.
The creation of dedicated National and State Disaster Mitigation Funds under the 2005 Act represents a significant paradigm shift. It moves the focus toward proactive investment in risk reduction measures rather than just providing reactive relief after a disaster. These funds are specifically intended for projects that reduce the long-term risk and severity of calamities, such as strengthening infrastructure or improving land use. By institutionalizing these funds, the government recognizes that spending on mitigation is more cost-effective and sustainable in the long run, as it prevents losses before they even occur.

142. (D) Incorporating earthquake-resistant design standards into the project plan.
Mainstreaming disaster risk reduction means integrating risk management into regular developmental projects. For a metro rail project in a seismically active area, this involves incorporating earthquake-resistant design standards directly into the project plan. By doing so, the infrastructure is built to withstand potential hazards, reducing future risks to passengers and property. This approach ensures that development is sustainable and does not create new vulnerabilities. It is a proactive strategy promoted by the National Disaster Management Plan 2019 to build national resilience and protect long-term investments from the impact of disasters.

143. (A) True
The Sendai Framework for Disaster Risk Reduction 2015-2030 includes a global target to substantially increase the number of countries with national and local disaster risk reduction strategies by the year 2020. India's National Disaster Management Plan, first released in 2016 and updated in 2019, is a direct and significant step toward fulfilling this international commitment. By developing a comprehensive national strategy, India has aligned its domestic policies with global

Click Here to Buy book on Amazon

Authority is led by the Chief Minister. The District Disaster Management Authority is chaired by the District Collector. However, the National Executive Committee is chaired by the Union Home Secretary, not the Home Minister. This ensures that the executive and operational coordination of the national plan is led by the highest-ranking civil servant in the relevant ministry, facilitating smooth administrative action.

132. (D) Disaster management is the shared responsibility of various government departments, agencies, and stakeholders.
The National Policy on Disaster Management 2009 promotes a 'multi-sectoral' approach, which recognizes that disaster management is a shared responsibility. It requires the active involvement of various government departments, such as health, agriculture, and infrastructure, as well as non-governmental organizations and the private sector. By involving multiple sectors, the policy ensures that risk reduction is integrated into all aspects of planning and that a wide range of expertise and resources can be mobilized during a crisis. This collaborative approach is essential for addressing the complex and wide-ranging impacts of disasters effectively.

133. (C) Priority 4: Enhancing disaster preparedness.
One of the global targets of the Sendai Framework is to substantially increase the availability of and access to multi-hazard early warning systems. This target directly corresponds to Priority 4, which focuses on enhancing disaster preparedness for effective response. Early warning systems are critical for saving lives by providing timely information that allows people to evacuate and take protective measures. By improving these systems and ensuring they reach all segments of the population, countries can significantly reduce the mortality and displacement caused by various natural and man-made hazards during emergency situations.

134. (B) To demonstrate financial accountability and justify expenditures.
Maintaining accurate financial records is essential for post-disaster audits, which serve the primary purpose of demonstrating accountability. During a disaster, large sums of public and donor money are spent rapidly. Audits verify that these expenditures were necessary, legal, and used for their intended humanitarian or recovery purposes. Accurate documentation allows agencies to justify their spending and provides transparency to the public and funding bodies. This practice not only prevents fraud and mismanagement but also builds the trust needed to secure future financial support for disaster risk reduction and response operations.

135. (B) P-3, Q-2, R-1, S-4
Disaster management planning in India follows a clear hierarchical structure where specific authorities are responsible for plans at different levels. The National Executive Committee is responsible for the National Disaster Management Plan, while the State Executive Committee handles the State-level plan. At the local level, the District Disaster Management Authority prepares the District Plan. Finally, Panchayats and Urban Local Bodies are responsible for community-level planning. This structure ensures that disaster management is integrated from the national level down to the grassroots, allowing for a coordinated and localized response to various calamities.

136. (A) The Geneva Conventions
The Geneva Conventions are international treaties that establish standards for humanitarian treatment in war, primarily focusing on the protection of non-combatants and prisoners of conflict. They are distinct from international instruments like the Sendai Framework, Hyogo Framework, and Yokohama Strategy, which deal specifically with disaster risk reduction and the management of natural and man-made disasters. While both are related to humanitarian protection, their legal contexts and primary objectives differ. The disaster-specific frameworks provide guidelines and targets for reducing vulnerability and building resilience against various environmental, technological, and biological hazards globally.

137. (C) Its effective integration with local-level plans and community participation.
The success of a District Disaster Management Plan depends heavily on its integration with local-level plans and the active participation of the community. Because the district is the primary administrative unit for response, its plan must reflect local vulnerabilities and resource

International disaster frameworks have evolved from the Yokohama Strategy's focus on prevention to the Hyogo Framework's five priorities and the Sendai Framework's measurable global targets. The Sustainable Development Goals also incorporate disaster resilience into their targets. However, none of these frameworks are legally binding treaties in the sense of international law; they are voluntary, non-binding agreements that countries commit to politically. While they have significantly influenced national legislations like India's 2005 Act, they rely on national cooperation rather than legal enforcement through an international judicial system or treaty monitoring body.

151. (D) Tracking the repayment schedule and conditions of loans taken by the government for reconstruction.
Debt monitoring is a specific activity within post-disaster financial management focused on the sustainability of recovery funding. When governments take out loans from national or international institutions to finance large-scale reconstruction projects, they must track the repayment schedules and interest conditions. Monitoring these debts ensures that the financial obligations remain manageable and do not lead to long-term fiscal instability. This process is essential for maintaining government accountability and ensuring that the costs of recovery today do not become an unmanageable burden for future generations or jeopardize other critical public services.

152. (A) Both Statement I and Statement II are true.
All expenditures from the State Disaster Response Fund must conform to the norms and guidelines established by the Central Government. This standardization is necessary to ensure a minimum standard of relief for disaster victims across the entire country. By providing uniform guidelines, the central government ensures that relief is provided equitably, regardless of which state is affected. This consistency also facilitates national monitoring and auditing of disaster funds. It ensures that finite resources are used effectively and that all citizens receive a basic level of care and support during an emergency.

153. (C) Vertically and horizontally integrated structure from national to district level.
A distinguishing feature of the institutional arrangement under India's Disaster Management Act 2005 is its vertically and horizontally integrated structure. Vertically, it connects the National, State, and District levels through a clear hierarchy of authorities. Horizontally, at each level, it integrates various government departments and ministries through executive committees. This dual integration ensures that disaster management is not the responsibility of a single agency but is a coordinated effort across all levels and sectors of government. This structure is essential for a unified and effective national response to various scales of calamities.

154. (A) DRR requires the participation of all stakeholders, including government, civil society, the private sector, and academia.
The 'all-of-society' approach advocated by the Sendai Framework recognizes that disaster risk reduction is not the sole responsibility of the state. Instead, it requires the active participation and partnership of all stakeholders across society. This includes civil society organizations, the private sector, academic and scientific institutions, and the affected communities themselves. By engaging all segments of society, DRR strategies can leverage a wider range of knowledge, resources, and influence. This inclusive approach is more effective at building overall resilience and ensuring that risk reduction measures are culturally appropriate and sustainable.

155. (D) Understand and correctly apply emergency procurement procedures that allow for faster acquisition while maintaining accountability.
In a disaster scenario where standard rules are causing life-threatening delays, a financial manager's knowledge of specialized procurement practices becomes critical. They should understand that disaster management frameworks typically include emergency procurement procedures designed for such high-stakes situations. These procedures allow for faster acquisition of essential supplies like medicine by simplifying tendering requirements while still maintaining necessary documentation for accountability. Correctly applying these expedited rules ensures that the emergency is addressed immediately without abandoning the essential principles of transparent financial

Downloaded from www.pdf.tube

targets, demonstrating its leadership in disaster risk reduction and its dedication to reducing the impact of various hazards through structured planning.

144. (B) Accounting, procurement, project management, and public administration.
A disaster financial management team requires a specific set of administrative and technical skills to be effective. Their role is not operational rescue but rather managing the economic side of a crisis. Therefore, the team should most appropriately include experts in accounting to track funds, procurement to acquire supplies, project management to oversee recovery, and public administration to navigate government systems. These skills ensure that financial resources are managed transparently, funds are used efficiently, and the overall recovery effort is well-coordinated and accountable to both donors and the public.

145. (C) A true but R is false.
The Disaster Management Act of 2005 is indeed a comprehensive law that provides a national framework for all aspects of disaster management. However, it did not replace pre-existing laws like the Environment Protection Act or the Factories Act. Instead, it complements these legislations, which continue to handle specialized areas such as industrial safety and environmental regulation. The DM Act acts as an overarching framework that integrates various sectoral efforts into a unified national strategy, ensuring that specialized safety laws work in harmony with the broader disaster management objectives and institutional structures.

146. (A) The Yokohama Strategy
The Yokohama Strategy and Plan of Action, adopted in 1994, was the first major international framework to place a strong emphasis on the role of community participation and local capacities. It recognized that people at the local level are the first to be affected by disasters and are the primary responders. By highlighting the importance of community-based disaster risk reduction, the Yokohama Strategy shifted the global perspective from a purely top-down government approach to one that values local knowledge and empowers communities to build their own resilience against various natural and man-made hazards.

NODIA

147. (C) Cause: Good records; Effect: Successful audit, accountability, and smoother reimbursement.
There is a direct cause-and-effect relationship between good financial record-keeping and the outcome of post-disaster audits. When an entity maintains meticulous and transparent records of its expenditures, the direct effect is a successful audit process. This demonstrates financial accountability and justifies every expense to funding agencies. Furthermore, good records lead to a smoother and faster reimbursement process, as there is clear evidence to support the claims made for recovering costs. Conversely, poor documentation can lead to failed audits, accusations of mismanagement, and the loss of critical future funding for recovery operations.

148. (D) Post-Disaster Economic Sanctions
The National Disaster Management Plan 2019 is organized based on the priorities of the Sendai Framework and focuses on five thematic areas of disaster management. These include understanding risk, strengthening DRR governance, investing in resilience, enhancing preparedness for response, and recovery. Inter-agency coordination is also a key feature. However, post-disaster economic sanctions are not part of the plan's thematic areas. The NDMP is designed to be a supportive and coordinating document aimed at reducing risk and building resilience, rather than being a punitive legal instrument for imposing economic sanctions on different entities.

149. (C) The State Disaster Management Authority
In the institutional structure established by the Disaster Management Act 2005, the State Executive Committee has the technical responsibility for drafting the State Disaster Management Plan. However, for this plan to be formally adopted and implemented, it must be approved by the State Disaster Management Authority. The SDMA, chaired by the Chief Minister, provides the necessary policy direction and political endorsement. This approval process ensures that the state plan is aligned with overall provincial priorities and that the necessary financial and administrative resources are committed to its successful execution across the state.

150. (C) I, II, III, and IV only

several years ago, however, would be the least relevant because they do not document actual expenditures or activities directly linked to the current disaster response and recovery operations being audited for financial accountability.

162. (B) I, II, and IV only
Disaster management funding in India is structured with the State Disaster Response Fund as the primary resource for states. The National Disaster Response Fund supplements these resources during disasters of a severe nature. The size and funding pattern of these funds are determined based on the periodic recommendations of the Finance Commission. Crucially, there is a clear distinction between response and mitigation funds; these funds cannot be used interchangeably. Response funds are for immediate relief, while mitigation funds are reserved for proactive risk reduction projects. This separation ensures that resources are always available for both purposes.

163. (C) It explicitly maps the activities under the plan to the relevant SDG targets.
The National Disaster Management Plan 2019 is designed to be consistent with international sustainable development goals. It explicitly maps its various disaster management activities to relevant targets within the Sustainable Development Goals. This mapping shows how disaster risk reduction contributes to achieving broader developmental objectives, such as ending poverty, improving health, and making cities more resilient. By linking these frameworks, the NDMP ensures that India's disaster management strategies support long-term sustainability and that development progress is protected from the devastating impacts of natural and man-made hazards across the country.

164. (D) Across all phases of the disaster lifecycle, including mitigation, preparedness, response, and recovery.
Disaster financial management is a comprehensive field that encompasses activities across the entire disaster lifecycle. It is not limited to any single phase. Before an event, it involves budgeting for mitigation and preparedness. During the response phase, it focuses on managing cash flow for immediate relief. In the aftermath, it deals with funding for recovery and reconstruction. By addressing all phases, financial management ensures that resources are available to reduce risks, respond effectively to emergencies, and support sustainable long-term rebuilding, thereby contributing to the overall resilience of the nation against various calamities.

165. (C) Specialist response force for search, rescue, and relief.
The primary role of the National Disaster Response Force is to serve as a specialized body for emergency response. It is not a policy-making or financial agency. Instead, it consists of personnel trained in expert search, rescue, and relief operations for both natural and man-made disasters. This includes specialized capabilities for handling chemical, biological, radiological, and nuclear emergencies. The NDRF's mission is to provide an immediate and professional response to save lives and alleviate suffering during the most critical stages of a disaster, complementing the efforts of local and state administrations.

166. (A) Both A and R are true and R is the correct explanation of A.
The Disaster Management Act of 2005 empowers the District Disaster Management Authority to take over buildings and resources for response operations. This provision is based on the reality that during a disaster, immediate access to shelters and equipment is critical for saving lives. Normal administrative procedures for procurement or requisition may be too slow to address the urgent needs of the situation. By providing these emergency powers, the Act ensures that local authorities can mobilize the necessary resources without delay, facilitating a more effective and timely response to various emergency situations within the district.

167. (D) The Sendai Framework for Disaster Risk Reduction
The Sendai Framework for Disaster Risk Reduction 2015-2030 was the first international framework to set a specific goal of substantially reducing global disaster mortality by 2030. This is one of its seven global targets, which aim to measure progress in reducing the human and economic impacts of disasters. By setting this clear and quantifiable goal, the Sendai Framework provides a metric for the international community to evaluate the effectiveness of

Click Here to Buy book on Amazon

shifted the emphasis toward "managing disaster risk." This change reflects an understanding that efforts must go beyond just responding to events and should focus on addressing the root causes and underlying risk factors that lead to disasters. By focusing on managing risk, the international community aims to build a more resilient world where hazards are identified and mitigated before they result in devastating human and economic losses.

180. (D) Accountability and transparency.
The process of documenting disaster assessments and justifying expenditures for reimbursement demonstrates the fundamental principles of accountability and transparency. Public agencies must show how and why they used the Disaster Response Fund to ensure that resources were provided to those in need. This detailed record-keeping prevents mismanagement and corruption, which are significant risks during chaotic disaster situations. Transparency builds trust with the public and ensures that funding agencies continue to support recovery efforts. Ultimately, these administrative requirements maintain the integrity of the overall disaster management system and ensure that public funds are used ethically and effectively.

181. (C) I, II, III, and IV only
India's disaster management framework is led by specific chairpersons across different levels. The NDMA is headed by the Prime Minister, the SDMA by the Chief Minister, and the DDMA by the District Collector. The National Executive Committee is chaired by the Union Home Secretary. While the NDRF is a specialized force, it is not a civilian force made of volunteers; rather, it is a professional body composed of personnel on deputation from central paramilitary forces who receive expert training. Correctly understanding this leadership structure is vital for recognizing the administrative and operational command hierarchy established by the 2005 Act.

182. (B) Catastrophe-wise strategies and resource mobilization.
The National Disaster Management Plan 2019 represents a significant enhancement over its previous version by including several new features. A key addition is the inclusion of catastrophe-wise strategies, which provide specific guidance for handling different types of hazards. The plan also focuses on more detailed resource mobilization to ensure that the necessary equipment and personnel are available for various disaster scenarios. These enhancements make the plan more operational and practical for government agencies. By addressing specific types of calamities, the updated NDMP provides a more nuanced and effective framework for building national resilience and protecting vulnerable populations.

NODIA

183. (A) Both A and R are true and R is the correct explanation of A.
Financial management for humanitarian response is significantly more complex than corporate finance because of the environment in which it operates. It must function in high-stakes, time-sensitive, and often chaotic situations where infrastructure may be destroyed and security risks are high. Managers must balance the urgent need to provide aid with the necessity of maintaining strict financial controls and accountability. This complexity requires specialized systems for local procurement and cash distribution that are not typically needed in normal business operations. These unique challenges demand highly skilled professionals who can navigate extraordinary conditions while ensuring aid reaches beneficiaries.

184. (A) The Disaster Management Act, 2005.
The legal mandate for the creation of District Disaster Management Plans comes directly from the Disaster Management Act of 2005. The Act requires every district in India to prepare a comprehensive plan that identifies vulnerabilities, inventories resources, and outlines response procedures. This statutory requirement ensures that disaster management is institutionalized at the local level across the entire country. By providing a legal basis for these plans, the Act ensures that they are not just voluntary guidelines but are essential administrative documents that guide the actions of the district authorities and local bodies during both peacetime and emergencies.

185. (C) A people-centered, all-of-society approach with defined roles for all stakeholders.
A key innovation of the Sendai Framework, compared to the earlier Hyogo Framework, is its

landslide-prone slopes, and deplete the natural systems that provide protection against hazards. By highlighting these root causes, the Yokohama Strategy emphasized that disaster risk reduction must address social and economic development issues to be effective in the long term, laying the foundation for future resilience frameworks.

174. (D) They must ensure that the acquisition of goods and services is done in a timely, fair, and accountable manner.
Knowledge of procurement and contracting practices is essential for disaster financial managers to ensure that relief resources are acquired properly. During an emergency, goods and services like food, medicine, and transport must be procured quickly to save lives. However, this acquisition must still be done in a fair and accountable manner to prevent corruption and ensure value for money. Professionals must understand the specialized procedures that allow for expedited purchasing while still maintaining the transparency required for public and donor funds. This ensures that the response is both effective and administratively sound under high-pressure conditions.

175. (A) Decentralized and integrated.
The institutional arrangement for disaster management in India under the 2005 Act is best described as decentralized and integrated. It is decentralized because it distributes powers and responsibilities across the national, state, and district levels, ensuring that action can be taken close to the ground. It is integrated because it requires coordination between various government departments and ministries through specialized executive committees. This dual approach ensures that disaster management is a unified national effort that is also responsive to local needs, providing a robust framework for handling everything from small local incidents to major national catastrophes.

176. (B) Conducting a multi-hazard risk assessment for a city.
Priority 1 of the Sendai Framework for Disaster Risk Reduction is "Understanding disaster risk." Conducting a multi-hazard risk assessment for a city is a direct and practical way to achieve this goal. Such assessments involve identifying various hazards, analyzing the vulnerability of populations and infrastructure, and estimating potential impacts. This knowledge is fundamental for making informed decisions about land use, building codes, and emergency planning. By understanding these risks, authorities can prioritize mitigation measures and develop more effective preparedness strategies, moving from reactive response toward a more proactive and informed approach to managing disaster risks globally.

NODIA

177. (A) P-3, Q-1, R-4, S-2
Disaster financial management involves several specific strategies and activities. Cash flow management ensures that liquid funds are available for emergency procurement during a crisis. Risk avoidance involves making strategic decisions, such as not building in high-risk zones, to prevent potential future losses. Expense reimbursement is the process where a local entity recovers costs from a higher level of government. Financial analysis is used to evaluate the cost-effectiveness of proposed mitigation projects. Understanding these correctly paired concepts is essential for managing the economic and administrative complexities across all phases of the disaster management cycle and building overall resilience.

178. (A) Lay down the State disaster management policy and plan.
The primary role of the State Disaster Management Authority is to act as the apex body for disaster management at the provincial level. According to the 2005 Act, the SDMA is responsible for laying down the state's disaster management policy and approving the State Disaster Management Plan. It also coordinates the implementation of this plan across various departments and ensures that the district authorities follow the required guidelines. This centralized authority at the state level is essential for ensuring a coordinated provincial response and for providing strategic direction for risk reduction and preparedness within its jurisdiction.

179. (C) Focusing on 'managing disaster risk'.
The transition from the Hyogo Framework to the Sendai Framework marked a significant conceptual shift in global strategy. While the Hyogo Framework was primarily focused on "managing disasters," the Sendai Framework

together toward common resilience goals. This administrative function is essential for ensuring that the long-term rebuilding process is managed accountably, stays within budget, and effectively restores and improves the community's overall safety and stability.

203. (C) Statement I is false, but Statement II is true.
The legal scope of the Disaster Management Act of 2005 is comprehensive and is not limited to any single type of hazard. While it is often associated with natural events like floods and earthquakes, the Act's definition of "disaster" is broad and explicitly includes calamities arising from both natural and man-made causes. This ensures that the institutional framework and dedicated funds can be used to manage technological accidents, industrial leaks, and other human-caused emergencies. By adopting this "all-hazards" approach, the Act provides a versatile and robust legal basis for responding to a wide variety of national crises.

204. (B) Comparing its long-term benefits in terms of losses avoided versus its upfront construction and maintenance costs.
Performing financial analysis on a disaster mitigation project, such as a sea wall, is a critical technical task. It primarily involves a cost-benefit analysis where the upfront expenses for construction and ongoing maintenance are compared against the long-term benefits of the project. These benefits are measured in terms of the potential human and economic losses that the project is expected to prevent during future disaster events. This type of analysis helps decision-makers determine the financial viability of a project and ensures that limited public resources are invested in strategies that provide the highest overall risk reduction.

205. (C) The Director General of the NDRF.
The command and control structure of the National Disaster Response Force is vested in the Director General of the NDRF. This senior official is responsible for the overall operational readiness, training, and deployment of the force's various battalions across the country. While the general superintendence of the NDRF is vested in the NDMA, the Director General provides the day-to-day professional leadership needed to ensure the force can respond effectively to emergencies. This specialized command structure is essential for maintaining the high standards and rapid response capabilities of a professional force dedicated to search, rescue, and relief operations.

206. (A) 1, 4, 2, 3
International agreements on disaster risk reduction and development have been adopted in a clear chronological sequence. The Yokohama Strategy and Plan of Action was adopted first in 1994. It was followed by the Hyogo Framework for Action in 2005, which aimed to build the resilience of nations. In 2015, two major frameworks were adopted: the Sendai Framework for Disaster Risk Reduction and the Sustainable Development Goals. This timeline reflects the global community's evolving understanding of disaster risk and its integration into the broader agenda for sustainable development and global resilience over the past three decades.

207. (A) The DDMA functions under the direct command of the NDMA, bypassing the state level.
The institutional arrangement for disaster management in India is designed as a vertically integrated three-tier structure. The National Disaster Management Authority provides policy at the apex, followed by the State Disaster Management Authorities at the provincial level. The District Disaster Management Authorities form the primary unit for implementation at the local level. It is incorrect to say the DDMA bypasses the state level; instead, it works closely with the SDMA to ensure that provincial policies are implemented locally. This structured hierarchy ensures coordination and accountability at every level of government, from the national center down to the grassroots.

208. (B) Seeking repayment from a higher-level government entity for approved disaster-related expenses.
Expense reimbursement is a critical administrative process in post-disaster financial management. It typically involves a lower-level government entity, such as a district or municipality, seeking repayment from a higher-level entity, such as the state or central government, for disaster-related costs. These costs must be for approved activities, such as

Downloaded from www.pdf.tube

strong emphasis on a people-centered and all-of-society approach. It explicitly recognizes that disaster risk reduction is a shared responsibility that requires the participation of all stakeholders, including the private sector, civil society, and the communities themselves. This approach defines specific roles for various actors and encourages inclusive partnerships. By focusing on people and involving all segments of society, the Sendai Framework aims to create more equitable and sustainable risk reduction strategies that address the unique needs of different groups, particularly the most vulnerable.

186. (A) The capacity to track expenses by specific disaster, location, project, and category of spending.
A robust disaster financial accounting system must have the capacity to meticulously track and categorize all expenditures. This means the system should be able to break down costs by the specific disaster event, the precise location where the money was spent, the individual project it belongs to, and the category of the spending, such as relief supplies or infrastructure repair. Such detailed tracking is essential for ensuring transparency and meeting the reporting requirements of donors and government agencies. It also facilitates effective auditing and helps prevent the misuse of funds during the complex and often chaotic recovery phase.

187. (D) Personal financial crises of individuals.
The National Policy on Disaster Management 2009 provides a framework for managing a wide range of large-scale calamities. This includes natural disasters like floods and earthquakes, man-made disasters such as industrial accidents, and public health emergencies like epidemics. The policy focuses on events that cause substantial human suffering or damage to the environment and property on a scale that requires a coordinated government response. Personal financial crises of individuals do not fall under the purview of this policy, as they are private matters that do not constitute the type of collective catastrophe defined in disaster management legislation and planning.

188. (B) The Central Emergency Response Fund (CERF) of the United Nations.

NODIA

The Central Emergency Response Fund of the United Nations is a prominent example of a disaster financial assistance program at the international level. CERF provides rapid funding to humanitarian organizations to respond to new or deteriorating crises, ensuring that aid can be delivered quickly when it is most needed. Unlike local or national relief funds, which are managed within a single country, CERF is a global pool of resources funded by various donors. It is designed to be a flexible and fast mechanism for addressing urgent humanitarian needs worldwide, reflecting the international community's shared commitment to disaster response.

189. (B) Both Statement I and Statement II are false.
Disaster management plans in India are designed to be part of a highly integrated and hierarchical system. State Disaster Management Plans are not standalone; they must be consistent with the National Policy and Plan to ensure a unified approach across the country. Similarly, District Disaster Management Plans are not created in isolation; they are developed after consultation with local bodies, such as Panchayats and municipalities, to ensure they address grassroots vulnerabilities and resource capacities. This interconnected planning process is fundamental to the 2005 Act, which aims to create a coordinated and multi-level framework for disaster risk reduction and response.

190. (D) To ensure that long-term risk reduction is not neglected due to the immediate pressures of post-disaster response.
The primary purpose of having a dedicated Disaster Mitigation Fund is to protect resources for long-term risk reduction. Often, after a disaster, the immediate and urgent needs of response and relief can consume all available funding, leaving little for future prevention. By institutionalizing a separate mitigation fund, the government ensures that projects aimed at reducing long-term risks, such as strengthening buildings or improving drainage, receive consistent financial support. This proactive approach helps prevent future disasters from occurring or reduces their impact, which is more cost-effective and sustainable than relying solely on reactive post-event response and recovery operations.

disaster risk reduction strategies. Achieving this target requires a worldwide effort to improve early warning systems, strengthen infrastructure, and reduce community vulnerability globally.

168. (A) Managing a collection of individual recovery and mitigation projects as a single portfolio to optimize outcomes and resources.
Portfolio management in the context of disaster finance refers to the systematic oversight of multiple recovery and mitigation projects. By managing these individual projects as a single portfolio, authorities can better optimize the allocation of limited resources and ensure that various initiatives work together toward common resilience goals. This approach allows for better monitoring of budgets, schedules, and overall progress. It ensures that the collective impact of these projects is greater than if they were managed in isolation, leading to a more efficient and effective recovery process that builds long-term community strength.

169. (C) The Response Fund is for post-disaster activities, while the Mitigation Fund is for pre-disaster risk reduction activities.
The fundamental difference between the Disaster Response Fund and the Disaster Mitigation Fund lies in the timing and nature of the activities they support. The Response Fund is dedicated to post-disaster activities, such as providing immediate relief, emergency rescue, and rehabilitation for victims. In contrast, the Mitigation Fund is reserved for pre-disaster activities aimed at reducing long-term risks, such as building stronger infrastructure or improving drainage systems. This clear separation of funds ensures that the government can both respond effectively to current crises and invest proactively in preventing future disaster impacts across the country.

170. (A) The Motor Vehicles Act (for movement of emergency vehicles)
While the Disaster Management Act of 2005 is the central legislation, several other laws provide critical support during a crisis. The Motor Vehicles Act is a prime example, as its provisions can be used to facilitate the rapid movement of emergency vehicles, such as ambulances and fire trucks, through traffic. Other acts, like the Epidemic Diseases Act or the Essential Commodities Act, also provide specialized legal tools for managing health risks or ensuring the supply of vital goods. This interconnected legal framework ensures that authorities have all the necessary powers to respond effectively to complex disaster situations.

171. (D) Encouraging risky behavior among citizens.
The National Policy on Disaster Management 2009 places a strong emphasis on capacity development as a core strategy for building resilience. This includes training response personnel to handle emergencies, conducting public awareness campaigns to educate citizens, and strengthening the institutional capabilities of government agencies. These efforts are all designed to reduce vulnerability and improve the effectiveness of disaster management activities. Encouraging risky behavior is entirely contrary to the objectives of the policy, which seeks to promote a culture of safety and preparedness to minimize the impact of natural and man-made hazards on the population.

172. (B) Both Statement I and Statement II are false.
The leadership of the District Disaster Management Authority is specifically defined by the Disaster Management Act of 2005. The District Collector or Magistrate serves as the Chairperson, while the elected representative of the local authority, such as the Chairperson of the Zila Parishad, serves as the co-chairperson. This structure ensures a balance between administrative expertise and local political representation. Statements claiming the elected representative is the chairperson or that the collector is only the co-chairperson are incorrect. This unique arrangement is designed to facilitate coordinated action between the district administration and local government bodies during a crisis.

173. (C) Population growth, urbanization, and environmental degradation.
The Yokohama Strategy, adopted in 1994, identified that global disaster vulnerability was increasing due to several critical human and environmental factors. These included rapid population growth, unplanned urbanization, and ongoing environmental degradation. These factors often push people into living in more hazardous areas, such as floodplains or

Click Here to Buy book on Amazon

phase and facilitates the long-term restoration of public assets and economic stability.

197. (C) The 1999 Odisha Super Cyclone and the 2001 Gujarat Earthquake.
The Disaster Management Act of 2005 was a landmark legislative response to the lessons learned from several major disasters in India. The devastating 1999 Odisha Super Cyclone and the 2001 Gujarat Earthquake in Bhuj highlighted the critical need for a more structured, coordinated, and proactive approach to managing calamities. These events showed that the traditional ad-hoc relief measures were insufficient to handle high-magnitude disasters. The resulting Act provided a comprehensive legal framework, established dedicated authorities, and shifted the national strategy from purely reactive relief toward a more holistic model of prevention, mitigation, preparedness, and specialized response.

198. (B) I, II, III and IV only
Disaster financial management consists of several core administrative and economic activities. These include cash flow management to ensure immediate liquidity, debt monitoring to track loans used for recovery, and project and portfolio management to oversee reconstruction. Accurate financial record-keeping is also essential for transparency and auditing. While medical triage is a vital field activity during a disaster, it is a clinical and operational task carried out by healthcare professionals, not a function of the financial management team. The focus of financial management is to provide the economic support and accountability necessary to sustain the overall disaster response and recovery effort.

199. (D) Specialized training, state-of-the-art equipment, and rapid deployability.
The National Disaster Response Force has established itself as an effective body for emergency response due to several key factors. These include its specialized training in various rescue operations, its access to state-of-the-art equipment, and its high level of rapid deployability across the country. The force is designed to handle complex scenarios that exceed the coping capacity of local and state responders. This professional expertise and specialized capability ensure that the NDRF can provide a timely and expert response during the most critical stages of a disaster, ultimately saving lives and reducing suffering during both natural and man-made calamities.

200. (A) P-3, Q-1, R-2, S-4
India's disaster management framework is defined by several key legal and policy instruments adopted over different years. The Disaster Management Act was enacted in 2005, followed by the adoption of the National Policy on Disaster Management in 2009. Internationally, the Sendai Framework for Disaster Risk Reduction was adopted in 2015. The latest version of India's National Disaster Management Plan was released in 2019. Correctly identifying this timeline is important for understanding the historical development and ongoing evolution of disaster risk reduction and management strategies at both the national and global levels, reflecting a growing commitment to resilience.

NODIA

201. (C) SDG Target 11.5: Significantly reduce deaths, affected people, and economic losses from disasters.
Sustainable Development Goal Target 11.5 is the most directly related to the primary goals of the Sendai Framework. This target explicitly aims to significantly reduce the number of deaths and the total number of people affected globally by disasters. It also focuses on reducing direct disaster economic losses relative to the global gross domestic product. By sharing these specific objectives, the SDGs and the Sendai Framework provide a unified global agenda for building resilience. This integration recognizes that sustainable human settlements and communities cannot be achieved without effectively managing disaster risks and protecting people from potential calamities.

202. (A) A mix of long-term recovery, reconstruction, and mitigation projects.
In the context of disaster financial management, project and portfolio management involves the systematic oversight of various long-term initiatives. This typically includes a mix of recovery and reconstruction projects, such as rebuilding infrastructure, alongside mitigation projects aimed at reducing future risks. By managing these diverse projects as a single portfolio, authorities can optimize resource allocation and ensure that various efforts work

191. (A) Prevent misuse of relief resources and ensure they reach the genuinely affected.
The Disaster Management Act of 2005 includes penalties for making false claims for relief to protect the integrity of the disaster response system. During a crisis, relief resources are often limited, and it is vital that they reach the people who are genuinely affected by the disaster. By establishing legal consequences for fraudulent claims, the Act aims to prevent the misuse of funds and supplies. This provision ensures that aid is distributed equitably and effectively, maintaining public trust in the government's ability to provide assistance to those most in need during highly stressful and resource-constrained emergency situations.

192. (B) Last-mile delivery of goods to affected populations.
Supply chain management in a disaster context involves the entire process of getting aid to victims. A key activity within this process is the "last-mile delivery," which refers to the final step of transporting relief goods from local warehouses or distribution centers directly to the affected populations. This is often the most challenging part of the supply chain due to damaged roads, blocked infrastructure, and the urgent need for essential items like food and water. Effective last-mile delivery is critical for the success of any humanitarian mission, ensuring that the aid actually reaches those in desperate need.

193. (B) Substantially increase international cooperation to developing countries.
The Sendai Framework for Disaster Risk Reduction has seven global targets, which are divided into those that aim to reduce losses and those that aim to increase capacity. One of the three "increase" targets is to substantially increase international cooperation to developing countries. This recognizes that many developing nations face higher disaster risks but have fewer resources to manage them. By increasing technical and financial assistance, the international community aims to help these countries develop their own risk reduction strategies and build resilience. This collaborative target is essential for achieving a more equitable and resilient global environment by 2030.

194. (A) Participatory and collaborative.
The institutional framework for disaster management in India is designed to be participatory and collaborative. It involves various stakeholders, including different levels of government, specialized forces, non-governmental organizations, and local communities. The structure established by the 2005 Act encourages cooperation through multi-sectoral committees and mandates consultation with local representatives during the planning process. This approach recognizes that effective disaster management requires the collective effort and knowledge of all segments of society. By being participatory, the framework ensures that disaster strategies are inclusive, transparent, and reflect the actual needs and capacities of those most affected by calamities.

195. (A) Both A and R are true and R is the correct explanation of A.
India's National Disaster Management Plan is closely aligned with the priorities and goals of the international Sendai Framework for Disaster Risk Reduction. As a signatory to the Sendai Framework, India is committed to implementing its global targets and guiding principles within its own national context. The NDMP incorporates the four priority themes of the framework, such as understanding risk and investing in resilience. This alignment ensures that India's disaster management efforts are consistent with international best practices and contribute to the global goal of substantially reducing disaster risks and losses in lives and economic assets by the year 2030.

196. (D) Post-disaster financial recovery for public entities.
The process of assessing disaster damage and seeking expense reimbursement is a critical component of post-disaster financial recovery for public entities. When local or state governments incur significant costs for emergency operations or the repair of public infrastructure, they must document these expenses to recover funds from national programs or insurance. This reimbursement mechanism is essential for maintaining the fiscal health of these entities and ensuring they can continue to provide vital services after a major event. It is a structured administrative process that follows the response

Downloaded from www.pdf.tube

emergency relief or infrastructure repair, and must be supported by detailed documentation. This mechanism is essential for maintaining the fiscal stability of local governments that often exhaust their budgets during a crisis. It ensures that those on the front lines of response can recover their financial expenditures.

209. (C) A is true but R is false.
The Disaster Management Act of 2005 mandates the preparation of disaster management plans at the national, state, and district levels. However, the reason for this is to create a highly coordinated and integrated response system, not a disjointed one. By having plans at every level that are consistent with each other, the Act ensures that actions are synchronized and that resources can be mobilized effectively across different jurisdictions. This multi-level planning process is designed to bridge the gap between national policy and local implementation, ensuring a unified and structured approach to reducing disaster risks and managing emergencies nationwide.

210. (A) Using pre-approved vendor lists and simplified emergency procurement procedures.
Balancing speed with accountability is a major challenge in humanitarian financial management. One effective mechanism for achieving this is the use of pre-approved vendor lists and simplified emergency procurement procedures. By identifying reliable suppliers beforehand, agencies can significantly reduce the time needed to acquire essential relief items when a disaster strikes. Furthermore, simplified procedures allow for faster contracting during the emergency phase while still maintaining a formal process that can be documented and audited. This approach ensures that life-saving aid is delivered quickly without abandoning the core principles of financial control and transparency during a crisis.

211. (C) The Hyogo Framework for Action
The Hyogo Framework for Action 2005-2015 was the first major international framework to strongly promote the concept of "mainstreaming" disaster risk reduction into development planning. It emphasized that disaster risks are not just environmental issues but are deeply connected to social and economic development. By integrating risk reduction into regular development activities, such as infrastructure building or land-use planning, nations can prevent new risks and reduce existing vulnerabilities. This proactive approach was a core strategic goal of the HFA, highlighting that sustainable development is impossible without systematic efforts to manage disaster risks across all sectors of society globally.

212. (D) Disasters offer development opportunities that can be utilized through careful planning.
The National Policy on Disaster Management 2009 is built upon the premise that disasters, while devastating, can offer unique development opportunities. This concept is reflected in the principle of "Building Back Better," where the recovery and reconstruction phase is used to rebuild infrastructure and social systems more resiliently than they were before. By utilizing these opportunities through careful planning, communities can reduce their vulnerability to future hazards. This forward-looking premise encourages a shift from purely reactive relief toward a strategy that uses the recovery process as a catalyst for long-term sustainable development and national resilience across the country.

NODIA

213. (A) I and II only
Robust disaster financial accounting systems are essential for ensuring transparency and accountability in the use of public funds during a crisis. Similarly, disaster financial assistance programs provide critical sources of funding for long-term recovery efforts. However, it is incorrect to say that supply chain management is unrelated to financial management; the two are deeply connected, as logistics involve significant expenditures and procurement. Furthermore, cash flow management is a major, not minor, concern during an emergency to ensure liquidity for life-saving operations. Both accounting and assistance programs are fundamental pillars of effective disaster financial administration.

214. (B) 23 December 2005
The Disaster Management Act of 2005 is the central legislation that provides the legal framework for all disaster management activities in India. It was enacted by the Parliament and received the formal assent of the President of India on 23 December 2005. This date marks the beginning of a new era in India's approach

to calamities, providing a statutory basis for establishing dedicated authorities at the national, state, and district levels. The Act unified the country's efforts, moving beyond fragmented relief measures to a more structured and holistic strategy for managing both natural and man-made disaster risks nationwide.

215. (D) Preparing for a wide range of hazards, including natural and man-made.
The 'all-hazards' approach adopted by the National Policy on Disaster Management 2009 is a comprehensive strategy that involves preparing for a wide range of potential threats. Instead of focusing only on common hazards like floods, this approach requires authorities to develop systems that can manage natural disasters, technological accidents, chemical leaks, and biological hazards. By preparing for multiple hazards, the government ensures that its institutional structures and response mechanisms are versatile and can be adapted to various emergency scenarios. This integrated model is essential for building national resilience in an increasingly complex and interconnected world of diverse disaster risks.

216. (A) It is the executive arm of the SDMA, responsible for implementing its decisions and preparing the state plan.
The State Executive Committee plays a vital operational role in India's disaster management framework. As the executive arm of the State Disaster Management Authority, it is responsible for implementing the decisions and policies laid down by the SDMA. A primary duty of the SEC, chaired by the Chief Secretary, is to prepare the State Disaster Management Plan and coordinate its execution across various government departments. By serving as the administrative and coordinating hub at the provincial level, the SEC ensures that high-level policies are translated into practical, well-integrated actions on the ground across the entire state.

217. (C) A focus on both natural and man-made hazards, and their interaction with environmental, technological, and biological risks.
The Sendai Framework for Disaster Risk Reduction is considered more comprehensive than its predecessor because of its significantly expanded scope. It moves beyond a focus on natural hazards to explicitly include man-made hazards and their complex interactions with environmental, technological, and biological risks. This includes addressing threats like industrial accidents and global pandemics within the disaster management framework. By acknowledging these diverse and interconnected risks, the Sendai Framework promotes a more holistic and modern approach to disaster risk reduction that is better suited to handle the complex challenges of the 21st century across all nations.

218. (A) Support requests for reimbursement and demonstrate accountability to stakeholders.
Maintaining accurate financial records during a disaster is not just an administrative task but a critical requirement for accountability. These records are necessary to justify expenditures to government bodies, donors, and the public. Furthermore, they are essential for supporting formal requests for reimbursement, as higher-level agencies or insurance programs require detailed documentation of costs incurred during response and recovery operations. By providing a clear and verifiable trail of spending, good record-keeping protects officials from mismanagement claims and ensures that the financial integrity of the disaster management system is maintained during and after the crisis.

219. (D) The provision of telecommunication resources for disaster mitigation and relief operations.
The Tampere Convention is a major international legal instrument that specifically deals with the use of telecommunications in disaster management. It establishes a framework for the provision of telecommunication resources for disaster mitigation and relief operations. The convention aims to facilitate international cooperation by reducing regulatory barriers that might prevent the rapid deployment of communication equipment across borders during an emergency. By ensuring that responders have access to reliable and cross-border communication systems, the Tampere Convention helps improve the coordination and effectiveness of international disaster response efforts, ultimately saving lives through better connectivity during crises.

Click Here to Buy book on Amazon

220. (C) I, II, and III only
India has a robust legal framework where the Disaster Management Act of 2005 serves as the central legislation. It is complemented by other laws, such as the Environment Protection Act of 1986, which regulates hazardous chemicals, and the Factories Act of 1948, which mandates emergency planning in industries. These laws work together to prevent and manage both natural and technological risks. Contrary to the idea that the Indian Penal Code is not applicable, it actually contains various provisions that can be used to handle cases of criminal negligence related to disaster safety, ensuring accountability for actions that endanger public lives.

221. (C) To provide a framework for all government and non-government agencies to work in a coordinated manner.
The primary objective of the National Disaster Management Plan is to create a comprehensive framework that enables all government and non-government agencies to work together in a coordinated manner. The plan outlines the roles and responsibilities of different departments, ensuring that everyone knows what to do across all phases of the disaster cycle. By providing this unified direction, the NDMP prevents duplication of effort and ensures that resources are used efficiently. This collaborative approach is essential for managing the wide-ranging and complex impacts of disasters, ultimately aiming to build a more resilient and prepared nation.

222. (D) Scale of the event's consequences, such as loss of life, suffering, and damage.
Under the Disaster Management Act of 2005, the definition of 'disaster' is based primarily on the scale of the event's consequences rather than its specific cause. For an event to be legally recognized as a disaster, it must result in substantial loss of life or human suffering, or lead to significant damage to property or the environment. This definition focuses on the impact and the fact that the occurrence exceeds the coping capacity of the affected community. This scale-based definition allows the framework to be applied to a wide range of natural and man-made catastrophes requiring specialized government intervention.

223. (A) Special category states receive a higher percentage of their contribution from the Centre (90%).
The funding pattern for the State Disaster Response Fund acknowledges the varying financial capacities of different states. While the Central Government contributes 75% of the fund for general category states, it provides a significantly higher contribution of 90% for special category states, which include the Himalayan and North-Eastern states. This higher central share is intended to support these states, which often face high disaster risks but have limited local revenue sources. This fiscal arrangement ensures that all states, regardless of their economic status, have the necessary financial resources to manage notified disasters and provide immediate relief.

224. (B) The National Executive Committee acts as the executive wing to implement the policies and plans laid down by the NDMA.
The relationship between the National Disaster Management Authority and the National Executive Committee is one of policy-making and execution. The NDMA is the apex body responsible for laying down policies, plans, and guidelines at the national level. The NEC acts as the executive arm of the NDMA, coordinating the implementation of these policies across various central ministries and government departments. The NEC, chaired by the Union Home Secretary, ensures that the strategic vision of the NDMA is translated into practical administrative action and that the national plan is effectively executed throughout the country's institutional structure.

225. (A) Both A and R are true and R is the correct explanation of A.
The Sendai Framework places a strong emphasis on the need to invest in disaster risk reduction for resilience. This is based on the well-established understanding that investing in proactive measures, such as building stronger infrastructure and improving early warning systems, is significantly more cost-effective in the long run than spending on reactive response and recovery operations. By reducing risk beforehand, countries can avoid the massive costs associated with disaster-related destruction and social disruption. This economic argument is a key

Downloaded from www.pdf.tube

driver behind the global push for a shift toward systematic risk management and sustainable developmental planning.

226. (A) To ensure that the State Disaster Management Plan is implemented in the district.
The District Disaster Management Authority has the critical responsibility of ensuring that the State Disaster Management Plan is effectively implemented at the local level. As the primary administrative unit for disaster management, the DDMA translates provincial policies into district-specific actions. It coordinates with various local departments and bodies to identify vulnerabilities and execute the necessary risk reduction and response measures. By fulfilling this role, the DDMA ensures that the overarching state strategy is grounded in local realities and that the district is adequately prepared to handle both natural and man-made disasters within its jurisdiction.

227. (B) P-3, Q-2, R-1, S-4
Both the Hyogo and Sendai frameworks are organized into specific priorities for action that have evolved over time. The Hyogo Framework's Priority 1 focused on making disaster risk reduction a national and local priority, while its Priority 3 emphasized the use of knowledge and education to build resilience. The Sendai Framework's Priority 1 shifted the focus toward a more comprehensive understanding of disaster risk, and its Priority 3 prioritized investing in risk reduction for resilience. Understanding these correctly mapped priorities is essential for tracking the conceptual shift from institutionalizing risk reduction to a more technical and economic-focused global strategy.

228. (D) Prevent fraud and corruption and ensure aid reaches those in need.
Financial management for humanitarian response requires robust internal controls to maintain the integrity of relief operations. In the chaos that often follows a disaster, the risks of fraud, corruption, and mismanagement are significantly heightened. Internal controls, such as clear procurement rules and tracking systems, are designed to prevent these issues and ensure that limited resources are provided to the intended beneficiaries. By maintaining strict financial discipline, humanitarian organizations can demonstrate accountability to their donors and the public, which is essential for sustaining long-term support and ensuring that aid effectively alleviates human suffering during crises.

229. (C) The Hyogo Framework and the Sendai Framework.
The vision of India's National Disaster Management Plan 2019 is to make the country disaster-resilient and significantly reduce the loss of life, livelihoods, and assets. This vision is directly aligned with the core goals of both the Hyogo Framework for Action 2005-2015 and its successor, the Sendai Framework for Disaster Risk Reduction 2015-2030. Both international frameworks emphasize a global commitment to shifting toward systematic risk reduction and building resilience. By aligning its national plan with these frameworks, India demonstrates its adherence to global standards and its dedication to achieving measurable reductions in disaster impacts through coordinated national efforts.

NODIA

230. (B) Effectively and transparently managing tenders for debris removal services.
A practical application of "Knowledge of Procurement and Contracting Practices" in disaster management is the effective and transparent management of tenders for essential recovery services, such as debris removal. Following a disaster, these services must be acquired quickly to restore normalcy. However, a financial manager must ensure that the process remains fair, competitive, and well-documented to justify the use of public funds and prevent corruption. This requires an understanding of how to use expedited emergency procedures correctly, ensuring that the necessary services are procured at a fair price and that the resulting contracts are legally sound and accountable.

231. (D) NDMA, SDMA, DDMA
The Disaster Management Act of 2005 established a vertically integrated three-tier structure to manage calamities across India. At the top is the National Disaster Management Authority, which provides policy and direction for the entire country. The second tier consists of the State Disaster Management Authorities at the provincial level. The third tier is the District Disaster Management Authorities, which act as the primary units for implementation

at the grassroots. This hierarchical sequence ensures that disaster management is a unified national effort that scales from national policy down to state-level coordination and localized implementation in every district.

232. (A) Both Statement I and Statement II are true.
Disaster financial management involves both proactive and sustainable strategies. Debt monitoring is essential for tracking and managing the financial obligations incurred during reconstruction, ensuring that recovery funding does not lead to long-term fiscal instability. Risk avoidance is a proactive strategy where potential hazards are eliminated by making strategic choices, such as deciding not to invest in or build in highly vulnerable areas. Both strategies are critical for building long-term resilience; debt monitoring ensures economic sustainability, while risk avoidance prevents the creation of new vulnerabilities and potential financial losses before they can even occur during future events.

233. (C) Sendai Framework for Disaster Risk Reduction
The Sendai Framework for Disaster Risk Reduction 2015-2030 was the first international framework to introduce specific, measurable global targets. While earlier strategies like the Yokohama Strategy and the Hyogo Framework provided important guidelines and goals, they lacked quantifiable metrics to track progress objectively. The seven global targets of the Sendai Framework provide a clear set of benchmarks for reducing mortality, the number of affected people, and economic losses by 2030. This shift toward a results-oriented approach allows the international community to hold nations more accountable and scientifically evaluate the effectiveness of disaster risk reduction strategies globally.

234. (A) Response and recovery operations
When a District Disaster Management Authority takes measures to remove debris or demolish dangerous buildings following a calamity, these activities are considered part of response and recovery operations. These actions are necessary to ensure public safety and facilitate the restoration of essential services immediately after an event. In disaster financial management, the expenses incurred for such activities are typically eligible for reimbursement through disaster response funds. These tasks are distinct from long-term mitigation projects or preparedness drills, as they are specifically designed to address the physical consequences and immediate hazards created by a specific disaster event.

235. (D) Use the opportunity to rebuild infrastructure and systems to a higher standard of resilience.
The "Build Back Better" principle, endorsed by the Sendai Framework, encourages nations to use the recovery and reconstruction phase as an opportunity for improvement. Instead of simply restoring the pre-disaster state, this principle emphasizes rebuilding infrastructure and social systems to a higher standard of resilience. This involves integrating disaster risk reduction measures into new designs to ensure that the reconstructed environment is better prepared for future hazards. By adopting this approach, communities can break the cycle of disaster damage and reconstruction, ultimately leading to more sustainable development and a significant reduction in long-term disaster vulnerability and losses.

236. (A) I, II, III, and IV only
The key disaster management bodies in India have specific, mandated functions under the 2005 Act. The NDMA provides national policies and guidelines, while SDMAs handle provincial policies and plans. DDMAs act as the primary planning and coordinating hubs at the district level. The NDRF is the specialist force dedicated to emergency response and rescue operations. However, the National Executive Committee is responsible for coordinating the implementation of the national plan, not for drafting the national budget. Budgetary matters are handled by the Ministry of Finance, based on the requirements identified by various disaster management authorities and commissions.

237. (C) Ensuring that financial strategies do not create long-term debt burdens or fiscal instability for the government.
Sustainability in disaster financial management refers to the long-term economic viability of the strategies used to fund recovery and risk reduction. It involves ensuring that the methods used to finance reconstruction do not create unmanageable long-term debt burdens or lead

Click Here to Buy book on Amazon

health, while risk avoidance involves making strategic investments to reduce future losses. These proactive steps ensure that the financial system is stable and better prepared to handle economic impacts.

281. (A) To prepare for audits and ensure accountability.
Maintaining meticulous financial records after a disaster is vital for transparency and accountability. These documents provide a detailed trail of how public and donor funds were spent during the emergency. Accurate record-keeping is specifically necessary to prepare for inevitable audits, which verify that all expenditures were legitimate and justified. This process helps build public trust and ensures accountability in recovery.

282. (B) forming the basis for claiming and allocating funds.
Disaster assessment is a critical first step in the recovery process, involving a systematic evaluation of damage to infrastructure and property. The data gathered during this assessment provides the factual foundation needed to claim financial assistance from higher government levels or international donors. By quantifying the extent of the loss, authorities can ensure that funds are allocated accurately and effectively.

283. (B) performing financial analysis and maintaining records for recovery projects.
The principles of project and portfolio management are directly applied to disaster recovery to ensure structured and efficient operations. This involves conducting detailed financial analysis of various recovery projects to determine feasibility and impact. Furthermore, these management principles emphasize the importance of maintaining accurate financial records, which is essential for tracking progress, managing resources across initiatives, and meeting audit requirements.

284. (A) emergency protective measures and repair work.
Expense reimbursement in disaster financial management refers to the process of recovering costs incurred during emergency operations. This typically covers expenditures related to immediate protective measures taken to save lives and property, as well as the costs of permanent repair work on damaged infrastructure. Effective reimbursement processes require detailed documentation to prove that the funds were used for essential disaster-related activities.

285. (C) financial governance and public trust.
A disciplined approach to financial documentation during and after a disaster significantly strengthens overall financial governance. By ensuring that every transaction is tracked and auditable, authorities demonstrate their commitment to transparency and the responsible use of funds. This transparency is crucial for maintaining and building public trust, as it provides assurance that resources are being used effectively to support recovery.

286. (D) Because standard procedures are often too slow and rigid for emergencies.
In a disaster context, time is a critical factor, and delays in obtaining supplies can cost lives. Standard peace-time procurement processes are often too bureaucratic and slow to meet the urgent needs of an emergency. Therefore, specialized knowledge of rapid and flexible procurement practices is essential. These methods allow for the swift acquisition of goods while still maintaining transparency and accountability.

NODIA

287. (C) sourcing, procurement, storage, and distribution of goods.
Effective supply chain management during a disaster is a complex process that goes beyond simple transportation. It encompasses the sourcing of essential items, rapid procurement under pressure, and the efficient storage and distribution of aid. Each step must be carefully managed to ensure that life-saving supplies reach affected populations as quickly and as efficiently as possible during the crisis.

288. (B) transparency and accountability.
While emergency procurement procedures must prioritize speed and flexibility to address urgent needs, they must also maintain high standards of transparency and accountability. This balance is necessary to prevent fraud, waste, and corruption during a crisis. By using pre-approved vendor lists and clear legal frameworks, authorities

The Hyogo Framework for Action identified 'underlying risk factors' as the root causes that increase the vulnerability of communities to disasters. Examples of these factors include widespread poverty and unplanned urban development in hazardous areas like steep slopes or floodplains. When people are forced to live in vulnerable locations due to economic reasons, even a small hazard can result in a major disaster. Addressing these factors is essential for effective risk reduction, as it focuses on the socio-economic conditions that turn environmental hazards into human catastrophes. Successful DRR requires integrated development policies that reduce poverty and improve land-use planning.

244. (D) National Disaster Response Fund (NDRF)
If a state government exhausts its State Disaster Response Fund during a severe calamity, it can request assistance from the National Disaster Response Fund for its response activities. The NDRF is managed by the Central Government and is specifically intended to supplement the resources of the states during disasters of a severe nature. This mechanism ensures that a lack of provincial funds does not halt life-saving emergency relief and rescue operations. After a formal assessment of the situation by a central team, additional funds can be allocated to the state to meet the extraordinary expenses created by the disaster.

245. (C) The Hyogo Framework for Action
The Sendai Framework for Disaster Risk Reduction 2015-2030 is the direct successor to the Hyogo Framework for Action 2005-2015. While the Hyogo Framework was a ten-year plan that successfully galvanized global commitment to risk reduction, the Sendai Framework was adopted to build on its successes and address its limitations over the next fifteen years. The Sendai Framework introduced more specific targets and an expanded scope that includes man-made and biological hazards. This transition reflects the global community's evolving strategy, moving from building resilience to managing comprehensive disaster risk through a more structured, inclusive, and measurable international agreement.

246. (A) Both Statement I and Statement II are true.
The leadership of local and provincial disaster authorities is clearly defined by the Disaster Management Act of 2005. At the district level, the District Collector or Magistrate serves as the Chairperson of the District Disaster Management Authority, ensuring specialized administrative leadership. At the state level, the Chief Minister serves as the Chairperson of the State Disaster Management Authority, providing high-level political support for disaster management policies. Correctly understanding these roles is essential for recognizing the institutional command structure that ensures coordinated disaster planning and response efforts between the professional administration and the elected political leadership across India's three-tier system.

247. (D) The clarity of eligibility criteria and the efficiency of the disbursement mechanism.
The effectiveness of any disaster financial assistance program depends heavily on two critical administrative factors. First, there must be clear and transparent eligibility criteria so that potential applicants understand what is required to receive aid. Second, there must be an efficient disbursement mechanism to ensure that funds reach the affected entities quickly. If the process is too complex or slow, the financial aid may arrive too late to be effective for immediate recovery. Program success is measured by how well it balances the need for accountability with the necessity of getting financial support to those in need without undue delay.

248. (A) The National Disaster Management Authority (NDMA)
Under the Disaster Management Act of 2005, the National Disaster Management Authority is responsible for approving the National Disaster Management Plan. While the National Executive Committee drafts the plan, the NDMA, chaired by the Prime Minister, provides the high-level policy review and formal approval necessary for its adoption. This process ensures that the national plan receives the highest level of political endorsement and is consistent with the country's strategic priorities for disaster risk reduction and management. Once approved, the National Plan provides the overarching framework for all government agencies and departments to

Downloaded from www.pdf.tube

coordinate their disaster-related activities across the country.

249. (C) Forecasting immediate and short-term cash needs for relief operations.
Cash flow management is a vital activity during a disaster, focusing on maintaining liquidity for immediate operational needs. A core part of this function is forecasting the immediate and short-term cash requirements for relief operations, such as purchasing supplies and paying responders. Unlike long-term economic assessments, cash flow management is concerned with the practical and urgent task of ensuring that funds are available exactly when and where they are needed on the ground. This helps prevent delays in critical response activities and ensures that the disaster management team can act decisively despite the financial uncertainties inherent in a major emergency situation.

250. (A) P-3, Q-4, R-1, S-2
India's disaster management architecture involves different bodies operating at specific levels and with specialized roles. The National Disaster Management Authority handles policy and coordination at the national level. The State Disaster Management Authority operates at the provincial or state level, while the District Disaster Management Authority functions at the local district level. The National Disaster Response Force is a specialized body dedicated to national-level specialist response and rescue operations. Correctly mapping these authorities to their respective levels of operation is essential for understanding the integrated and tiered administrative framework designed to manage both the policy and operational aspects of disaster management nationwide.

251. (B) A transition from a relief-centric approach to a proactive and holistic one.
The Disaster Management Act, 2005, significantly changed the focus of managing emergencies in India. Previously, the approach was primarily reactive, concentrating on providing relief after a calamity occurred. The new legislation promotes a proactive strategy, integrating disaster prevention, mitigation, and preparedness into a holistic framework to build national resilience and reduce the overall impact of hazards across the country.

252. (A) The Chief Minister of the respective state.
According to the institutional structure established by the Disaster Management Act, 2005, the State Disaster Management Authority serves as the apex body for planning at the state level. This authority is chaired by the Chief Minister of the respective state. This leadership ensures high-level political commitment and coordinated action across various state departments during disaster preparation and response efforts.

253. (C) The establishment of the NDMA, SDMA, and DDMA.
The Disaster Management Act, 2005, mandated a comprehensive legal framework characterized by a three-tiered institutional system. This structure includes the National Disaster Management Authority at the top, followed by State Disaster Management Authorities and District Disaster Management Authorities. This hierarchy ensures that disaster management efforts are coordinated and implemented effectively across national, state, and local administrative levels in India.

NODIA

254. (D) ensure systematic preparedness and mitigation.
The formulation of disaster management plans at multiple administrative levels is a core requirement of the 2005 legislation. These plans serve as strategic documents that outline specific measures for risk reduction and emergency response. By detailing procedures at national, state, and district levels, the framework aims to achieve systematic preparedness and effective mitigation efforts throughout the entire country.

255. (C) a safer and more disaster-resilient nation through an integrated process.
The primary objective of the Disaster Management Act, 2005, is to enhance the safety and resilience of the nation against various hazards. It seeks to achieve this through a continuous and integrated process involving planning, organizing, and coordinating. By moving beyond mere relief, the Act establishes a permanent institutional framework dedicated to reducing risks and improving response capabilities.

256. (B) The Sendai Framework for DRR.
The Sendai Framework for Disaster Risk Reduction 2015-2030 introduced "Build Back

Better" as a critical priority. This concept emphasizes utilizing the recovery, rehabilitation, and reconstruction phases after a disaster to enhance the resilience of communities. By integrating disaster risk reduction measures into restoration efforts, nations can ensure that reconstructed infrastructure and systems are stronger and better prepared for future events.

257. (D) the management of disaster risk rather than just managing disasters.
A fundamental shift between these two international frameworks is the focus of the Sendai Framework on managing disaster risk. While the earlier Hyogo Framework for Action prioritized managing the disasters themselves, the Sendai approach emphasizes understanding and reducing the underlying drivers of risk. This evolution represents a more comprehensive strategy aimed at preventing new risks and reducing existing hazard vulnerabilities globally.

258. (A) Using knowledge, innovation, and education to build a culture of safety and resilience.
The Hyogo Framework for Action 2005-2015 established five key priorities to guide global disaster risk reduction. One major priority focused on the strategic use of knowledge, innovation, and education. This was intended to foster a widespread culture of safety and resilience at all levels. It encouraged communities to use information and learning to better understand and mitigate their disaster risks.

259. (C) effective disaster risk management is considered essential for achieving sustainable development.
The Sendai Framework is closely linked with the 2030 Agenda for Sustainable Development. This alignment exists because the international community recognizes that disasters can significantly reverse development gains. Therefore, implementing effective disaster risk management is viewed as a prerequisite for achieving the Sustainable Development Goals. Protecting lives, livelihoods, and infrastructure from hazards is fundamental to ensuring long-term, sustainable economic and social progress.

260. (A) The Yokohama Strategy.
The Yokohama Strategy and Plan of Action for a Safer World, adopted in 1994, served as an early international milestone in disaster risk management. It established the foundational principles and guidelines that shaped subsequent global agreements. Both the Hyogo Framework for Action and the Sendai Framework for Disaster Risk Reduction built upon the concepts and strategic goals originally introduced in this strategy.

261. (D) The NDMP 2019 is the operational document that implements the vision of the NPDM 2009.
India's disaster management strategy utilizes two complementary documents. The National Policy on Disaster Management 2009 provides the broad vision and guiding philosophy for a proactive approach. The National Disaster Management Plan 2019 serves as the operational counterpart, translating that overarching policy vision into specific, actionable frameworks. It details the roles and responsibilities of various government levels to ensure practical implementation.

262. (B) The Sendai Framework for Disaster Risk Reduction.
The National Disaster Management Plan 2019 is significant for being the first national-level plan in India to align with the global Sendai Framework. By incorporating the priorities and targets set by the Sendai Framework, the plan ensures that India's domestic disaster management efforts are consistent with international standards. This alignment focuses on understanding risks, strengthening governance, and enhancing preparedness for recovery.

263. (C) proactive, multi-disaster-oriented, and technology-driven.
The National Policy on Disaster Management 2009 shifted India's approach away from reactive relief. It promotes a strategy that is proactive and capable of addressing multiple types of disasters simultaneously. Furthermore, the policy emphasizes a technology-driven approach, utilizing modern scientific tools and innovations to improve risk assessment, early warning systems, and overall disaster mitigation and response capabilities across the country.

264. (D) The national, state, and district levels.
The National Disaster Management Plan 2019 provides a comprehensive roadmap for all administrative levels in India. It clearly outlines

Click Here to Buy book on Amazon

to overall fiscal instability for the government. This requires a careful balance between immediate spending for relief and long-term planning for financial health. Sustainable financial management ensures that the country remains capable of responding to future disasters without compromising its economic growth or the provision of other essential public services, thereby protecting the welfare of future generations.

238. (A) Both A and R are true and R is the correct explanation of A.
The Disaster Management Act of 2005 includes a provision protecting its functionaries from legal action for decisions made in "good faith." This is critical because disaster situations are often chaotic and require officials to make swift, high-stakes decisions under immense pressure to save lives and property. Without such protection, the fear of undue litigation or personal liability could lead to hesitation or paralysis in decision-making during a crisis. By providing this legal safeguard, the Act ensures that authorities can act decisively and effectively when every second counts, knowing that they are protected if they act honestly and reasonably.

239. (A) A dynamic document that requires periodic updates.
The National Disaster Management Plan 2019 is a dynamic document rather than a static historical account or a legally binding treaty. It is designed to be periodically updated to incorporate the latest scientific knowledge, changing risk profiles, and lessons learned from recent disasters. This flexibility ensures that the plan remains relevant and effective in addressing evolving threats like climate change and urbanization. By requiring regular reviews, the NDMP ensures that India's national disaster management strategy is always based on the most current data and best practices, providing a continually improving framework for protecting the entire country from various hazards.

240. (B) Extreme urgency, uncertain demand, and challenging operational environment.
A disaster relief supply chain is fundamentally different from a commercial one due to the unique conditions of an emergency. While commercial supply chains focus on profit and predictable demand, disaster logistics are characterized by extreme urgency, highly uncertain demand, and a challenging operational environment. Infrastructure damage often makes transportation difficult, and the need for life-saving items like food and medicine is immediate. These factors require a highly specialized and flexible approach to logistics that prioritizes the speed and reliability of delivery over profit maximization, ensuring that humanitarian aid reaches the right people during the most critical times.

241. (B) Centralizing all disaster management powers and revoking the authority of states.
The National Policy on Disaster Management 2009 has several objectives, including promoting a culture of prevention, encouraging technological mitigation, and mainstreaming risk reduction into development. However, centralizing all powers and revoking the authority of states is not one of its goals. On the contrary, the policy and the 2005 Act promote a decentralized and integrated structure that empowers state and district authorities. This approach recognizes that disasters occur locally and that state governments have the primary role in response. The policy aims to strengthen, not diminish, the institutional capabilities of provincial and local bodies to manage disaster risks effectively.

NODIA

242. (A) Well before a disaster strikes, with mitigation funding, preparedness budgeting, and financial planning.
Disaster financial management is a proactive process that begins well before a disaster actually occurs. It involves strategic activities like allocating funds for mitigation projects to reduce risks, budgeting for preparedness measures like training and equipment, and developing financial plans for emergency response. By planning ahead, governments ensure that the necessary resources and administrative procedures are in place to handle a crisis effectively. This early start is essential for building resilience and ensuring that the financial response is not ad-hoc but is structured and ready to be activated the moment a disaster strikes, minimizing delays in relief.

243. (C) Poverty and unplanned urban development in hazardous areas.

personnel from these paramilitary groups, the NDRF maintains a high standard of discipline, physical fitness, and operational readiness for demanding disaster response tasks.

273. (D) Conducting community awareness and capacity building programs.
Beyond its reactive role in emergencies, the National Disaster Response Force engages in various proactive activities. It plays a significant part in capacity building for state-level response forces and other stakeholders. Additionally, the NDRF conducts community awareness programs, mock drills, and training exercises. These efforts are designed to enhance local preparedness and ensure that communities are better equipped to handle disasters before they occur.

274. (A) chemical, biological, radiological, and nuclear (CBRN) incidents.
The National Disaster Response Force is uniquely trained to manage highly technical and dangerous emergencies. This includes specialized capabilities for responding to chemical, biological, radiological, and nuclear incidents. By maintaining expertise in these specific areas, the NDRF serves as a vital asset for the nation, capable of addressing complex man-made hazards that require professional skills and specialized protective equipment during rescue operations.

275. (C) The Disaster Management Act, 2005.
The establishment of the National Disaster Response Force was specifically provisioned under the Disaster Management Act, 2005. This landmark legislation provided the legal basis for creating a dedicated, multi-skilled force for disaster response in India. By formalizing the NDRF's existence and mandate within a national law, the Act ensured the force has a clear institutional role and authority within the country's disaster management framework.

276. (A) The availability of liquid funds for immediate response.
In the context of disaster financial management, cash flow management focuses on ensuring that liquid funds are readily available. During a crisis, immediate access to money is essential for procuring life-saving supplies, deploying personnel, and initiating emergency repairs. Effective management of these financial flows allows authorities to act swiftly without being hindered by bureaucratic delays during the critical response phase.

277. (D) strategic investments and policies to reduce future economic losses.
Risk avoidance in financial management involves making strategic decisions before a disaster occurs to minimize potential economic damage. This can include implementing strict building codes to prevent infrastructure failure or investing in early warning systems to reduce business disruptions. By proactively addressing vulnerabilities, organizations can avoid significant future costs associated with disaster recovery, thereby protecting long-term financial stability and sustainable development.

278. (B) manage the complex financial aspects of a crisis.
A dedicated Disaster Financial Management Team is essential for navigating the intricate financial environment that follows a disaster. This team possesses the specialized expertise required to handle budgeting, fund allocation, and financial tracking under high-pressure conditions. Their primary role is to ensure that financial resources are used efficiently, transparently, and in accordance with legal requirements, supporting both relief and recovery.

279. (C) enhancing a government's financial resilience to absorb shocks.
Effective Disaster Financial Management significantly strengthens the financial resilience of a government or organization. By implementing proactive planning, establishing contingency funds, and using risk transfer mechanisms, authorities can better absorb the sudden economic shocks caused by disasters. This resilience allows for a more rapid recovery process and ensures that essential development projects are not compromised by the sudden emergency.

280. (D) Debt monitoring and risk avoidance.
Disaster financial management involves several critical activities that must be performed before a disaster strikes. Debt monitoring and risk avoidance are key pre-disaster functions. Monitoring long-term debt helps maintain fiscal

NODIA

the specific functions and duties required from national ministries, state governments, and district authorities. By detailing responsibilities across the entire spectrum of disaster management, the plan ensures a synchronized effort from the central leadership down to the local implementation units.

265. (A) to be prepared in consonance with the National Disaster Management Plan.
State and District Disaster Management Plans are essential components of the decentralized planning process in India. Their primary purpose is to provide localized strategies for risk reduction and emergency response. These plans must be developed in harmony with the National Disaster Management Plan to ensure consistency. This alignment facilitates a coordinated national effort while allowing for specific regional and local hazard contexts.

266. (B) The National Disaster Management Authority (NDMA).
The National Disaster Management Authority acts as the apex body for disaster management at the central level in India. Its primary mandate involves formulating overarching policies, plans, and guidelines to ensure a timely and effective response to various disasters. It also holds the responsibility for approving the national plan and coordinating the disaster management efforts of different central ministries and departments.

267. (B) acting as the planning and implementing body at the district level.
Within India's three-tiered disaster management structure, the District Disaster Management Authority functions at the local administrative level. Its role is primarily operational, acting as the key body for planning, coordinating, and implementing disaster management activities within the district. The DDMA is responsible for creating the District Disaster Management Plan, ensuring that strategies are tailored to the specific needs of the local area.

268. (A) a hierarchical structure designed for decentralized implementation.
The institutional framework comprising the NDMA, SDMA, and DDMA is a hierarchical system that facilitates decentralized disaster management. While national and state authorities provide broad policy guidance and coordination, the district authorities handle localized implementation. This arrangement ensures that disaster management activities are appropriately distributed across different administrative levels, allowing for both large-scale national oversight and context-specific local actions.

269. (C) carried out at the most appropriate and localized administrative level.
The principle of subsidiarity suggests that disaster management planning and implementation should occur at the most localized level capable of handling the task. By empowering district and state authorities, the system ensures that responses are tailored to the specific geographical and social realities of an area. This decentralized approach enhances efficiency and ensures that those closest to the disaster take the lead.

270. (D) coordinate the implementation of the State Plan.
The State Disaster Management Authority is responsible for overseeing disaster management within its specific state. Its key duties include laying down state-level policies and approving the State Disaster Management Plan. Crucially, the SDMA coordinates the implementation of this state plan while ensuring it remains consistent with the National Plan. This ensures that disaster management activities are synchronized between state and central governments.

271. (C) To provide specialized response during disaster situations.
The National Disaster Response Force is a specialized and multi-skilled body established to handle emergency situations. Its primary mandate is to provide a professional, swift, and highly trained response to both natural and man-made disasters. As a dedicated force, it focuses on saving lives and providing immediate relief during the most critical phases of an emergency across various terrains in India.

272. (B) Various Central Armed Police Forces.
The personnel serving in the National Disaster Response Force are drawn from several Central Armed Police Forces. These include organizations such as the Border Security Force, the Central Reserve Police Force, and the Indo-Tibetan Border Police. By sourcing experienced

Downloaded from www.pdf.tube

can ensure that even rapid acquisitions are documented correctly and fully justifiable.

289. (D) delays in delivering life-saving aid.
A failure in any part of the financial-logistical chain can have devastating consequences during a disaster. For instance, a broken supply line or flawed procurement process can directly lead to significant delays in the delivery of life-saving aid. Such interruptions undermine the effectiveness of the entire relief effort, potentially increasing the suffering of the affected population and hindering humanitarian success.

290. (A) A rapid contract for emergency debris removal with clear monitoring terms.
Specialized contracting in a disaster focuses on speed and specific emergency needs. A rapid contract for debris removal is a clear example, as it addresses an immediate post-disaster requirement to clear access for aid and rescue teams. Unlike standard long-term contracts, these are designed for quick execution but include specific monitoring terms to ensure correct performance and fair pricing.

291. (C) To segregate and track revenues and expenditures for a specific disaster.
Disaster Financial Accounting Systems are specialized tools used to manage the finances of a specific emergency. Unlike routine accounting, these systems are designed to segregate all funds related to a particular disaster event. This clear separation allows authorities to track exactly how much was received and spent, facilitating accurate reporting, simplifying the audit process, and supporting reimbursement claims.

292. (A) channel monetary aid to affected individuals, businesses, and government bodies.
Disaster Financial Assistance Programs are established by governments to provide direct monetary support to those impacted by a calamity. These programs serve as vital mechanisms for recovery by channeling funds to diverse groups, including individuals needing home repairs, businesses seeking economic revitalization, and local government bodies responsible for rebuilding public infrastructure. Their primary aim is to facilitate an equitable recovery.

293. (D) The eligibility criteria and application procedures must be clear.
For disaster financial assistance programs to be effective, their design must be transparent and accessible. It is essential that eligibility criteria and application procedures are clearly defined and communicated to the public. Clarity in these areas ensures that aid reaches intended beneficiaries without unnecessary delays and prevents confusion or inequity in the distribution of resources among the affected population during recovery.

NODIA

294. (B) To outline the workflows, approvals, and controls for financial transactions.
Disaster Financial Management Processes provide the operational framework for handling money during a crisis. These processes outline specific workflows, required approvals, and internal controls for every financial transaction. By establishing these rules beforehand, authorities can ensure that funds are managed efficiently and transparently throughout the disaster lifecycle. This structured approach helps prevent financial mismanagement and ensures resources match established priorities.

295. (C) guarantee that affected businesses will return to profitability.
Specialized accounting systems provide the necessary financial framework to manage recovery resources effectively. By ensuring transparent and accurate tracking of expenditures, these systems help direct funds toward economic revitalization efforts. This structured financial oversight is intended to stabilize impacted commercial sectors, creating the necessary conditions for businesses to recover their operations and eventually return to a profitable state.

296. (D) To meet expenses for emergency response, relief, and immediate rehabilitation.
The Disaster Response Fund, established at both national and state levels in India, is a reactive financial mechanism. Its primary purpose is to provide immediate funding for expenses incurred during the critical stages of a disaster. This includes the costs of emergency response operations, the provision of relief to affected citizens, and initial rehabilitation efforts to stabilize the immediate situation.

297. (A) Projects designed to reduce the risk of future disasters.
The Disaster Mitigation Fund is a proactive financial tool dedicated to reducing the impact of future hazards. It is used exclusively to finance projects and measures that lower disaster risk, such as constructing protective infrastructure or enhancing early warning systems. Unlike response funds, the mitigation fund is utilized before a disaster occurs to build long-term resilience and decrease potential loss.

298. (B) both pre-disaster risk reduction and post-disaster relief.
India's financial architecture for disaster management includes both a Response Fund and a Mitigation Fund. This dual structure reflects a comprehensive policy approach that balances the need for immediate action with the importance of long-term prevention. By dedicating resources to both pre-disaster risk reduction and post-disaster relief, the framework ensures that the country is financially prepared for all phases.

299. (B) Retrofitting hospitals to make them earthquake-resistant.
A suitable project for the Disaster Mitigation Fund is one that proactively reduces future risk. Retrofitting critical infrastructure, such as hospitals, to withstand earthquakes is a perfect example of such a measure. By strengthening these buildings before an event occurs, the severity of the disaster's impact is reduced, ensuring that essential services remain functional and lives are saved during future calamities.

300. (A) At both the Central and State levels.
The legal framework in India mandates the establishment of dedicated disaster funds at two primary administrative levels. Both the Disaster Response Fund and the Disaster Mitigation Fund are created at the Central level and the State level. This arrangement ensures that both tiers of government have the necessary financial resources to manage their respective responsibilities in response and long-term risk reduction.

Click Here to Buy book on Amazon

CHAPTER 04

Society, Development and Disasters

1. Which of the following is considered a primary factor affecting the vulnerability of a population to disasters?
(A) National GDP
(B) Geographic location
(C) Political stability
(D) Global climate patterns

2. Which statement best defines 'cascading vulnerabilities' in the context of disasters?
(A) A situation where one form of vulnerability triggers or exacerbates another, creating a chain reaction of risk.
(B) Long-term vulnerabilities passed down between generations through social or economic heritage.
(C) Vulnerabilities restricted to a specific geographical feature, resembling the flow of a waterfall.
(D) The systematic process of addressing and reducing various vulnerabilities in a sequential order.

3. Consider the following statements regarding factors affecting vulnerabilities:
P. Social structures like caste and class can pre-determine a group's exposure to risk.
Q. Age is a significant factor, with both children and the elderly facing unique vulnerabilities.
R. Economic status is irrelevant to disaster vulnerability as natural hazards affect everyone equally.
S. Geographic location, such as living in a coastal area or a seismic zone, is a key determinant of vulnerability.
Which combination of the above statements is correct?
(A) P, Q, and S only
(B) P and R only
(C) Q, R, and S only
(D) P, Q, R, and S

NODIA

4. Which of the following is an example of a gender-sensitive disaster management practice?
(A) Providing a single type of relief kit to all affected households.
(B) Building shelters without separate and secure sanitation facilities for men and women.
(C) Distributing food aid only to the male head of the household.
(D) Ensuring women's participation in post-disaster community decision-making committees.

5. A relief camp manager ensures that separate, well-lit, and secure sanitation facilities are available for women and girls. This action primarily addresses which aspect of disaster management?
(A) Economic recovery
(B) Structural mitigation
(C) Gender-inclusive shelter management
(D) Logistical supply chain management

6. Which of the following is NOT a basic concept in Child-Centered Disaster Risk Reduction (CC-DRR)?
(A) Understanding the specific vulnerabilities of children in disasters.
(B) Recognizing children as passive victims without coping capacities.
(C) Promoting child-inclusive and child-sensitive disaster management.
(D) Acknowledging children's potential resilience and coping strategies.

7. Identify the incorrect statement regarding the vulnerability of the elderly in disasters.
(A) The elderly may have mobility issues, making evacuation difficult.
(B) They often suffer from chronic health conditions that can be aggravated during and after a disaster.
(C) Social isolation can prevent them from

failing.
(D) Disability is treated as a reason for providing charity rather than focusing on universal rights.

38. Consider the following actions taken during a disaster response:
P. Setting up child-friendly spaces in evacuation shelters.
Q. Prioritizing the resumption of schooling as soon as possible.
R. Training response teams on the psychological first aid for children.
S. Distributing relief materials without considering the specific nutritional needs of infants.
Which of the above actions are aligned with Child-Sensitive Disaster Management?
(A) P and Q only
(B) P, Q, and R only
(C) R and S only
(D) P, Q, R, and S

39. The capacity of a local government to raise additional revenue or reallocate funds to meet the unexpected expenses of disaster response and recovery is known as its:
(A) Financial vulnerability
(B) Financial capacity
(C) Direct cost
(D) Regional vulnerability

40. Livelihood diversification, such as a farmer also learning a non-agricultural trade, can be a key strategy for:
(A) Building resilience against disasters that affect a primary source of income.
(B) Increasing vulnerability to climate change.
(C) Complying with the Rights of Persons with Disabilities Act.
(D) Measuring the direct cost of a disaster.

41. Arrange the following disaster management concepts in a logical progression from individual attribute to societal barrier.
P. Handicap
Q. Disability
R. Impairment
(A) P, Q, R
(B) R, P, Q
(C) R, Q, P
(D) Q, R, P

42. What is a key principle of Disaster Resilient Infrastructure (DRI)?
(A) Ensuring that infrastructure systems can withstand, adapt to, and recover quickly from hazard events.
(B) Building infrastructure at the lowest possible cost, regardless of risk.
(C) Relocating all critical infrastructure away from populated areas.
(D) Focusing only on the resilience of communication infrastructure.

43. Which of the following is an example of a coping strategy for an elderly person during a heatwave?
(A) Ignoring the heat warning as a minor inconvenience.
(B) Engaging in strenuous outdoor activity during midday.
(C) Waiting exclusively for government assistance without taking personal precautions.
(D) Using traditional knowledge to stay hydrated and resting in cooler parts of the house.

44. Match List I with List II and select the correct option.
List I: (Term)
P. Caste
Q. Religion
R. Location
S. Class
List II: (Relevance to Disasters)
1. Living in a coastal village vs. an inland city.
2. Economic status influencing the quality of housing and access to resources.
3. Social hierarchy affecting access to aid and inclusion in decision-making.
4. Belief systems and social networks influencing coping mechanisms and sometimes fatalism.
(A) P-3, Q-4, R-1, S-2
(B) P-4, Q-3, R-2, S-1
(C) P-2, Q-1, R-4, S-3
(D) P-3, Q-2, R-1, S-4

45. An approach that recognizes that a person is not just 'disabled' or 'a woman' but could be,

Downloaded from www.pdf.tube

P. DiDRR involves actively involving Persons with Disabilities (PwD) in planning processes.
Q. Accessible early warning systems are a key component of DiDRR.
R. DiDRR principles suggest that PwD should be evacuated first, without consultation.
S. Shelter management under DiDRR must consider accessibility features like ramps and adapted toilets.
T. Rehabilitation for PwD post-disaster is considered outside the scope of DiDRR.

Which combination of the above statements is correct?
(A) P, Q, and S only
(B) Q, R, and T only
(C) P, S, and T only
(D) R and T only

15. The loss of a factory building due to a flood is categorized as what type of economic cost?
(A) Direct cost
(B) Indirect cost
(C) Welfare loss
(D) Secondary effect

16. Which statement best explains the relationship between poverty and disaster risk reduction (DRR)?
(A) Poverty has no correlation with disaster risk, as hazards are natural.
(B) Poverty is a key driver of vulnerability, as it limits people's capacity to cope with and recover from disasters.
(C) Wealthy communities are more vulnerable to disasters due to having more assets to lose.
(D) DRR initiatives primarily focus on wealthy areas to protect economic assets.

17. Arrange the following groups in a general order from typically more vulnerable to typically less vulnerable in a disaster context, considering only the primary characteristic mentioned.
P. An able-bodied adult male with a secure income
Q. An elderly person with a disability living alone
R. A child from a low-income family
S. A middle-class woman with access to resources

(A) P, S, R, Q
(B) Q, R, S, P
(C) R, Q, P, S
(D) S, P, R, Q

18. What is the primary objective of the Convention on the Rights of Persons with Disabilities (CRPD) in the context of disasters?
(A) Ensuring the protection and safety of persons with disabilities during risks and humanitarian emergencies.
(B) Providing direct financial assistance and economic aid to individuals with disabilities following a disaster event.
(C) Mandating the implementation of specific, hazard-resistant building codes for all new urban constructions.
(D) Creating a dedicated disaster management agency that focuses exclusively on the needs of persons with disabilities.

19. Which of the following is NOT a model of disability?
(A) Medical Model
(B) Social Model
(C) Economic Model
(D) Charity Model

20. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : Women often face increased workloads and livelihood challenges post-disaster.
Reason (R) : Post-disaster, women frequently take on additional caregiving responsibilities and may face barriers in accessing new employment opportunities or resources for rebuilding livelihoods.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

21. A community practices a distinctive settlement pattern of building houses on stilts in a flood-prone river basin. This is an example of:
(A) A poor urban planning choice.
(B) A government-mandated housing scheme.

large print.

Q. Inclusion of PwD in community vulnerability and capacity assessment (VCA).

R. Designing evacuation routes that are wheelchair accessible.

S. Ensuring search and rescue teams are trained to handle people with different impairments.

T. Assuming that family members will manage all needs of PwD.

Which combination of the above items aligns with the principles of Disability Inclusive DRR?

(A) P, Q, R, and S only
(B) Q, R, S, and T only
(C) P, S, and T only
(D) All P, Q, R, S, and T

54. A best practice for Elderly-Inclusive disaster management would be:

(A) Assuming all elderly people have family support.
(B) Using only social media for disseminating early warnings.
(C) Designing shelters with only bunk beds to maximize capacity.
(D) Creating a centralized database of elderly individuals with their specific needs and locations.

55. How does a change in land-use, such as converting agricultural land into an industrial zone, potentially increase disaster risk?

(A) By improving the local economy and reducing poverty.
(B) By increasing soil permeability and reducing runoff.
(C) By increasing impervious surfaces, which can lead to higher flood peaks and waterlogging.
(D) By promoting sustainable development practices.

56. Which of the following is NOT a sociocultural practice or tradition that can contribute to disaster risk reduction?

(A) Community grain banks for food security.
(B) A fatalistic belief that disasters are divine punishment and cannot be mitigated.
(C) Oral histories and stories that pass on knowledge of past floods or droughts.
(D) Traditional water harvesting structures.

57. The inability of a local municipality to cover the costs of debris removal and infrastructure repair after a major storm without external aid is a sign of its:

(A) High financial capacity
(B) Successful risk transfer strategy
(C) Sustainable development policy
(D) Financial vulnerability

58. The provision of psychosocial support and safe play areas for children in a post-disaster camp primarily addresses their:

(A) Coping strategies and resilience
(B) Nutritional needs
(C) Physical safety and educational continuity
(D) Long-term economic prospects

59. The concept of "resilience" in the context of vulnerable populations refers to:

(A) The ability to completely avoid the impacts of a disaster.
(B) The physical strength of buildings and infrastructure.
(C) The capacity of individuals and communities to cope with, adapt to, and recover from a disaster.
(D) The financial aid received from the government after a disaster.

60. Match List I with List II and select the correct option.

List I: (Framework/Act)

P. CRPD
Q. RPD Act (2016)
R. Sustainable Development Goals (SDGs)
S. Indian Knowledge System

List II: (Key Focus Area)

1. A domestic law in India strengthening the rights of persons with disabilities.
2. A global framework that includes goals on poverty, inequality, and climate action, intersecting with DRR.
3. A UN treaty ensuring the protection and safety of PwD in situations of risk.
4. Utilizing traditional and local practices for disaster management.

(A) P-1, Q-3, R-4, S-2
(B) P-3, Q-1, R-2, S-4
(C) P-4, Q-2, R-1, S-3

Click Here to Buy book on Amazon

(D) Capacity for sustainable development

30. Which term refers to the damage to human well-being, including psychological trauma and loss of cultural heritage, which is often difficult to quantify in monetary terms?
(A) Direct cost
(B) Indirect cost
(C) Financial vulnerability
(D) Welfare loss

31. Consider the following statements about Gender-Inclusive Disaster Management:
P. It recognizes the different needs and capacities of men, women, boys, and girls.
Q. It ensures equal representation of women in disaster planning and decision-making bodies.
R. It involves creating gender-specific early warning messages.
S. It focuses only on women, viewing them as the sole vulnerable group.
T. It promotes livelihood recovery programs that are accessible to both men and women.
Which combination of the above statements is correct?
(A) P, Q, S, and T only
(B) P, Q, R, and T only
(C) Q, R, and S only
(D) All P, Q, R, S, and T

32. The concept of "building back better" is most closely associated with which of the following?
(A) Strengthening the technological and social components of local early warning and response systems.
(B) Using post-disaster recovery and reconstruction phases to reduce various pre-existing vulnerabilities.
(C) Relying exclusively on traditional knowledge and community-based practices for all rebuilding efforts.
(D) Prioritizing the rapid restoration of all public services exactly as they existed before the disaster.

33. Which of the following is NOT a challenge in making economic assessments of disaster losses?
(A) Quantifying indirect costs like business interruption.
(B) The ease of calculating the replacement cost of destroyed infrastructure.
(C) Assigning a monetary value to human lives or cultural heritage.
(D) Accounting for the long-term impacts on economic growth.

34. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : Shanty settlements in urban areas are disproportionately vulnerable to disasters like floods and landslides.
Reason (R) : These settlements are often built with non-engineered materials on marginal, high-risk land, and residents lack secure tenure and access to basic services.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

35. The practice of observing the behavior of certain animals or changes in plant life to predict weather-related hazards is part of which system?
(A) Satellite-based remote sensing
(B) The Sendai Framework for DRR
(C) Local and traditional knowledge systems
(D) The Rights of Persons with Disabilities Act

36. An elderly woman is unable to flee her home during a flood because she cannot walk down the stairs and there is no ramp or elevator. In this context, the lack of a ramp is an example of a factor contributing to her:
(A) Impairment
(B) Resilience
(C) Coping strategy
(D) Handicap

37. Which of the following best describes the Social Model of Disability?
(A) Disability is viewed as a medical condition that requires a clinical cure or physical fix.
(B) Disability results from societal barriers (attitudinal or environmental) preventing full participation.
(C) Disability is defined as the direct outcome of an individual's personal misfortune or

Downloaded from www.pdf.tube

(C) A traditional coping strategy based on local knowledge.
(D) A temporary shelter solution post-disaster.

22. The business interruption and subsequent loss of income for workers at a factory that was damaged in an earthquake is an example of:
(A) A direct cost of the disaster.
(B) An indirect cost of the disaster.
(C) A welfare loss.
(D) A fiscal vulnerability.

23. Consider the following statements about vulnerabilities in urban areas:
P. Shanty settlements are often located in high-risk zones like steep slopes or floodplains.
Q. High population density in cities can facilitate the rapid spread of disease after a disaster.
R. Urban planning always successfully eliminates disaster risks in cities.
S. Critical infrastructure in cities is often interdependent, leading to cascading failures.
Which combination of the above statements is correct?
(A) P and R only
(B) Q, R, and S only
(C) P, Q, and S only
(D) P, Q, R, and S

24. What does 'Differential vulnerability' refer to in disaster studies?
(A) The varying levels and types of susceptibility to harm that exist among different groups within a society.
(B) The idea that all individuals in a community are vulnerable in the same way.
(C) The difference in vulnerability between two separate geographic regions.
(D) A mathematical formula to calculate the exact financial cost of a disaster.

25. A post-disaster needs assessment finds that while men are seeking wage labor in reconstruction, women are primarily engaged in unpaid work like caring for the injured, sourcing clean water, and managing household needs. This situation highlights:
(A) The efficiency of traditional labor division.
(B) The resilience of women in taking charge.
(C) Gender differentials in the disaster cycle and coping strategies.
(D) A lack of employment opportunities for men.

26. Match List I with List II and select the correct option.
List I: (Vulnerable Group)
P. Children
Q. Elderly
R. Persons with Disabilities
S. Women
List II: (Specific Vulnerability)
1. Increased risk of gender-based violence in shelters.
2. Difficulty in accessing early warning information due to sensory impairments.
3. Dependence on caregivers and disruption of education.
4. Chronic health conditions and reduced physical mobility.
(A) P-1, Q-2, R-4, S-3
(B) P-3, Q-4, R-2, S-1
(C) P-4, Q-3, R-1, S-2
(D) P-3, Q-2, R-1, S-4

27. The Rights of Persons with Disabilities Act of India was enacted in which year?
(A) 2005
(B) 2009
(C) 2019
(D) 2016

28. Which of the following is the most appropriate reason for the higher vulnerability of children in disasters?
(A) Their physical size and strength are less developed.
(B) All of the above.
(C) They have physiological and psychological immaturity.
(D) They are dependent on adults for safety and well-being.

29. A city's plan to build a new metro line and a high-rise commercial complex on a reclaimed wetland area is a development choice that could increase its:
(A) Social cohesion
(B) Economic resilience
(C) Vulnerability to flooding and subsidence

NODIA

for example, 'an elderly woman with a disability from a minority religious group' to understand their unique risk profile is based on the concept of:
(A) Sustainable development
(B) Financial vulnerability
(C) Intersectionality
(D) Cascading impacts

46. Which of the following is a primary goal of Child-Inclusive Disaster Management?
(A) To remove children from the affected area as quickly as possible without consulting them.
(B) To create separate, isolated shelters for children away from their families.
(C) To focus DRR efforts exclusively on adults, assuming they will care for children.
(D) To ensure children's voices are heard and they participate meaningfully in DRR processes appropriate to their age.

47. Consider the following statements related to the Rights of Persons with Disabilities Act (2016) and disasters:
P. The Act mandates that disaster management authorities must take measures to ensure the inclusion of PwD.
Q. It specifies the need for accessible information and environments during disasters.
R. The Act suggests that PwD are the sole responsibility of their families during emergencies.
S. It includes provisions for the protection and safety of PwD in situations of risk and humanitarian emergencies.
Which combination of the above statements is correct?
(A) P, Q, and S only
(B) Q and R only
(C) P, R, and S only
(D) P, Q, R, and S

48. The loss of future earnings due to a disability sustained in a disaster is classified as:
(A) A direct loss
(B) An indirect loss
(C) A fixed asset loss
(D) A secondary benefit

49. Identifying and documenting traditional weather forecasting methods, indigenous architectural designs, and community-based resource management practices falls under the study of:
(A) Disability Inclusive DRR
(B) Economic Aspects of Disasters
(C) Indian Knowledge System in Disaster Management
(D) Gender and Disasters

50. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : Development projects like the construction of embankments can sometimes increase disaster risk.
Reason (R) : Embankments, while protecting some areas, can increase the velocity of river flow and cause more severe flooding downstream or if they breach.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

51. "Welfare losses" due to disasters are distinct from direct and indirect economic costs because they:
(A) are easily insurable by private companies.
(B) encompass non-market impacts like psychological trauma, loss of life, and environmental degradation.
(C) represent the quantifiable damage to public infrastructure.
(D) only affect the wealthy segment of the population.

52. The term 'sex' refers to:
(A) The biological and physiological characteristics that define men and women.
(B) The socially constructed roles and behaviors.
(C) The legal status of an individual in society.
(D) The specific vulnerabilities faced by one group.

53. Consider the following items as part of a disaster management plan:
P. Development of IEC material in Braille and

Click Here to Buy book on Amazon

receiving timely warnings or assistance.
(D) The elderly population is always resilient and requires less specialized attention than other groups.

8. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : The term 'gender' in disaster studies refers to the socially constructed roles, responsibilities, and opportunities associated with being male or female.
Reason (R) : These socially constructed roles lead to differential vulnerabilities, exposures, and capacities for men and women in disaster situations.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

9. What is the primary focus of 'intersectionality' in the context of disaster vulnerability?
(A) The specific geographical intersection of tectonic plates that results in seismic activity.
(B) The coastal point where a river meets the sea, significantly increasing the risk of flooding.
(C) How overlapping social identities like gender and disability compound an individual's total risk.
(D) The critical crossroads of major transportation routes utilized for community evacuation.

10. A person has a diagnosed muscular dystrophy, which is a condition affecting their muscles. According to the terminologies related to disability, this condition itself is best described as an:
(A) Impairment
(B) Disability
(C) Handicap
(D) Activity limitation

11. Match List I with List II and select the correct option.
List I: (Disability Concept)
P. Impairment
Q. Disability
R. Handicap
S. CRPD
List II: (Description)
1. A disadvantage for a given individual, resulting from an impairment or a disability, that limits or prevents the fulfillment of a role that is normal for that individual.
2. A UN convention promoting the rights and dignity of persons with disabilities.
3. Any loss or abnormality of psychological, physiological, or anatomical structure or function.
4. Any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner considered normal for a human being.
(A) P-3, Q-4, R-1, S-2
(B) P-4, Q-3, R-2, S-1
(C) P-1, Q-2, R-3, S-4
(D) P-3, Q-1, R-4, S-2

12. The construction of a large dam for hydroelectric power, while aimed at development, can increase the vulnerability of downstream communities to flash floods if the dam fails. This is an example of the impact of:
(A) Sustainable development
(B) Development projects on disaster risk
(C) Disaster resilient infrastructure
(D) Indian knowledge systems in water management

NODIA

13. Which of the following represents an example of using the Indian Knowledge System for disaster response?
(A) Employing advanced satellite imagery systems to monitor and predict tropical cyclone trajectories.
(B) Implementing modern international standards for earthquake-resistant building codes and safety.
(C) Utilizing traditional community granaries to store food for emergencies or lean periods.
(D) Deploying high-speed fiber optic network infrastructure for the dissemination of early warnings.

14. Consider the following statements regarding Disability inclusive DRR (DiDRR):

(D) P-2, Q-4, R-3, S-1

61. Identify the incorrect pair regarding disaster impacts.
(A) Direct Costs : Damage to buildings and infrastructure.
(B) Indirect Costs : Business interruption and loss of revenue.
(C) Vulnerability : Location in a seismically active zone.
(D) Welfare Losses : Increased GDP growth post-disaster.

62. A "Gender-Sensitive" approach to disaster management primarily aims to:
(A) Treat men and women exactly the same in all situations.
(B) Recognize and respond to the different needs, capacities, and vulnerabilities of men and women.
(C) Focus relief efforts exclusively on women as they are always more vulnerable.
(D) Exclude men from participation in disaster management committees.

63. Which of the following is a key issue in urban planning that contributes to disaster risk?
(A) Strict enforcement of building codes and zoning regulations.
(B) Creation of green spaces and preservation of wetlands.
(C) Uncontrolled urban sprawl into hazardous areas.
(D) Development of robust public transportation systems.

64. Consider the following stages in a disaster situation:
P. Immediate search and rescue operations.
Q. Long-term rehabilitation and livelihood restoration.
R. Evacuation based on early warning.
S. Pre-disaster mitigation and preparedness planning.
Arrange these stages in their correct chronological order.
(A) S, R, P, Q
(B) R, S, P, Q
(C) S, P, R, Q
(D) P, R, Q, S

65. What is the most significant challenge in measuring the financial capacity of local governments to address natural disasters?
(A) Assessing their ability to generate unforeseen revenue or re-allocate existing funds under stress.
(B) Calculating the total population of the area.
(C) Counting the number of government buildings.
(D) Identifying the direct costs of a past disaster.

66. A community that has strong social networks, trusts its leaders, and collaborates effectively during a crisis is said to possess high:
(A) Financial vulnerability
(B) Social capital and resilience
(C) Physical vulnerability
(D) Economic loss potential

67. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : Children are not just passive victims in disasters but can be active agents in DRR.
Reason (R) : Through school-based programs and community activities, children can learn and share vital safety information, participate in drills, and contribute to building a culture of safety.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

68. The increased incidence of domestic violence and sexual exploitation in the chaotic environment of post-disaster shelters is a critical issue related to:
(A) Economic aspects of disasters.
(B) Disability inclusive DRR.
(C) Gender and disasters.
(D) Indian knowledge systems.

69. Which of the following best practices is central to Elderly-Sensitive Disaster Management?
(A) Providing high-energy, sugary foods in relief kits.
(B) Mandating that all elderly individuals

Downloaded from www.pdf.tube

earthquakes.
(B) Conducting awareness campaigns.
(C) Developing an early warning system.
(D) Preparing an evacuation plan.

86. The practice of communities mapping their own risks and resources is a key part of:
(A) Top-down disaster management.
(B) International disaster financing.
(C) The Medical Model of Disability.
(D) Participatory Vulnerability and Capacity Assessment (VCA).

87. Which of the following is NOT a recognized component of a Disability-Inclusive framework for disasters?
(A) The Sendai Framework's call for an all-of-society approach including PwD.
(B) A national budget allocation for sports and recreation.
(C) The CRPD's Article 11 on situations of risk and humanitarian emergencies.
(D) The RPD Act 2016's chapter on disaster management.

88. Arrange the following events and frameworks in the correct chronological sequence of their establishment or enactment.
P. Rights of Persons with Disabilities Act (India)
Q. Convention on the Rights of Persons with Disabilities (CRPD)
R. The Sendai Framework for Disaster Risk Reduction
(A) P, Q, R
(B) Q, R, P
(C) R, P, Q
(D) Q, P, R

89. A city government identifies that its main hospital, fire station, and emergency operations center are all located in a known flood plain. This assessment helps in:
(A) Measuring the financial capacity of the government.
(B) Understanding the Indian knowledge system.
(C) Applying gender-sensitive best practices.
(D) Identifying regional financial vulnerabilities.

NODIA

90. In the aftermath of a cyclone, a fishing community loses all its boats and nets. A relief program that provides cash grants for families to purchase new fishing gear is directly addressing:
(A) Livelihood recovery and DRR.
(B) Psychological trauma.
(C) Gender-based violence.
(D) Disability-inclusive infrastructure.

91. Match List I with List II and select the correct option.
List I: (Vulnerable Group)
P. Elderly
Q. Children
R. Women
S. Persons with Disabilities
List II: (Best Practice for Inclusion)
1. Provision of accessible toilets and ramps in shelters.
2. Establishment of "Child-Friendly Spaces" for play and psychosocial support.
3. Creation of women's committees for camp management and grievance redressal.
4. Targeted outreach with health information and medication management support.
(A) P-1, Q-3, R-2, S-4
(B) P-2, Q-4, R-1, S-3
(C) P-4, Q-2, R-3, S-1
(D) P-3, Q-1, R-4, S-2

92. Which of the following statements correctly differentiates between 'disaster-sensitive' and 'disaster-inclusive' approaches?
(A) 'Inclusive' means being aware of issues, while 'sensitive' means actively involving the concerned groups.
(B) 'Sensitive' means being aware of issues, while 'inclusive' means actively involving the concerned groups in the process.
(C) The terms are identical and can be used interchangeably.
(D) 'Sensitive' applies only to gender, while 'inclusive' applies only to disability.

93. A coping strategy employed by children in a post-disaster scenario could be:
(A) Taking on leadership roles in community reconstruction.
(B) Applying for bank loans to rebuild their homes.
(C) Drawing pictures or storytelling to process

disasters on children.
(D) It treats all children as a homogenous group with identical needs.

78. Consider the following statements about disaster risk and development:
P. Unsustainable development practices can create new disaster risks.
Q. Disasters can destroy years of development gains.
R. Development planning and disaster risk reduction should be integrated.
S. Economic development always automatically reduces disaster risk.
T. Large infrastructure projects have no bearing on disaster vulnerability.
Which combination of the above statements is correct?
(A) P, Q, and R only
(B) Q, R, and S only
(C) P, S, and T only
(D) R, S, and T only

79. The social exclusion of people from a particular caste, preventing them from accessing a community shelter during a flood, is a direct manifestation of:
(A) Gendered vulnerability
(B) Differential vulnerability based on caste
(C) Cascading impacts
(D) Elderly vulnerability

80. A major challenge in measuring the financial vulnerability of a local government is:
(A) The lack of qualified accountants in government service.
(B) The simplicity of government budget structures.
(C) The unpredictability of the timing and magnitude of natural disasters.
(D) The high level of insurance coverage for all public assets.

81. A key component of a Disability-Inclusive early warning system is:
(A) Using a single, standardized audio siren for all warnings.
(B) Ensuring warnings are disseminated in multiple, accessible formats (e.g., text, audio, visual, sign language).
(C) Broadcasting warnings only on national television channels.
(D) Leaving the responsibility of informing PwD to their neighbors.

82. In the context of disasters, what is the most significant livelihood issue for women in many societies?
(A) The destruction of home-based income-generating activities and loss of small livestock.
(B) Over-representation in high-paying reconstruction jobs.
(C) Preferential access to credit and loans for rebuilding businesses.
(D) Lack of caregiving responsibilities, freeing up time for paid work.

83. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : Integrating poverty reduction strategies with DRR is essential for building long-term resilience.
Reason (R) : Poverty increases vulnerability by forcing people to live in unsafe conditions and limiting their resources to cope with and recover from shocks.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

84. The concept of 'sustainable development' is crucial to long-term disaster risk reduction because it promotes:
(A) Rapid economic growth at any environmental cost.
(B) The relocation of all vulnerable populations to safe zones.
(C) Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
(D) A complete halt to all new development projects.

85. Which of the following is an example of a structural measure for creating Disaster Resilient Infrastructure?
(A) Retrofitting a hospital to withstand

Click Here to Buy book on Amazon

evacuate to a single, large central shelter.
(C) Assuming that younger family members will always handle their needs.
(D) Ensuring communication of warnings through multiple channels, including low-tech ones like door-to-door visits.

70. Consider the following statements about the role of Persons with Disabilities (PwD) in DRR:
P. PwD possess unique knowledge about their own needs and barriers in their environment.
Q. Including PwD in planning leads to more effective and inclusive outcomes.
R. The coping strategies of PwD are often overlooked by disaster managers.
S. PwD should be seen only as recipients of aid, not as contributors to the DRR process.
Which combination of the above statements is correct?
(A) P and S only
(B) Q, R, and S only
(C) P, Q, and R only
(D) P, Q, R, and S

71. The phenomenon where a disaster in one sector (e.g., power grid failure) leads to failures in other sectors (e.g., water supply, communications, healthcare) is known as:
(A) Intersectionality
(B) Sustainable development
(C) Cascading impacts
(D) Welfare loss

72. The presence of ancient texts and scriptures that describe floods, droughts, and earthquakes and suggest responses is considered a part of a country's:
(A) Literary sources within its traditional knowledge system.
(B) Modern disaster management plan.
(C) Financial vulnerability assessment.
(D) Disability-inclusive DRR framework.

73. The primary difference between an impairment and a disability is that an impairment is a problem in body function or structure, while a disability is:
(A) a social barrier.
(B) a medical diagnosis.
(C) a financial disadvantage.
(D) a resulting activity limitation.

74. A key aspect of linking livelihoods and DRR is to:
(A) Encourage everyone to move to urban areas for salaried jobs.
(B) Promote livelihood options that are less susceptible to local hazards.
(C) Provide cash handouts after every minor hazard event.
(D) Focus only on protecting industrial and commercial livelihoods.

75. Match List I with List II and select the correct option.
List I: (Disaster Phase)
P. Preparedness
Q. Response
R. Recovery
S. Mitigation
List II: (Gender-Specific Issue)
1. Unequal access to compensation or credit for rebuilding homes/livelihoods.
2. Women's safety concerns in poorly designed evacuation shelters.
3. Lack of female participation in planning committees and drills.
4. Construction of flood walls that negatively impact women's access to water sources.
(A) P-1, Q-4, R-2, S-3
(B) P-4, Q-3, R-1, S-2
(C) P-3, Q-2, R-1, S-4
(D) P-2, Q-1, R-4, S-3

NODIA

76. In a post-earthquake scenario, an urban planner advocates for new building regulations that incorporate seismic-resistant designs and land-use zoning that prohibits construction on fault lines. This initiative is a prime example of:
(A) Promoting urban vulnerability
(B) Focusing on response only
(C) Initiative for risk reduction in India
(D) Measuring indirect costs

77. Which of the following statements about Child-Centered DRR (CC-DRR) is incorrect?
(A) It involves establishing child-friendly spaces in evacuation centers.
(B) It prioritizes the rapid reopening of schools post-disaster.
(C) It considers the psychological impact of

their experiences.
(D) Developing new early warning technologies.

94. Consider the following statements regarding the impact of development projects:
P. Dams can displace communities, increasing their social vulnerability.
Q. Embankments can create a false sense of security, discouraging preparedness.
R. Changes in land-use from forests to agriculture can increase landslide risk.
S. All development projects inherently and automatically reduce disaster risk for everyone.
Which combination of the above statements is correct?
(A) P and Q only
(B) Q, R, and S only
(C) P, Q, and R only
(D) P, Q, R, and S

95. The primary purpose of identifying natural disasters with potential financial implications is to:
(A) Enable governments to plan for budget contingencies and risk financing.
(B) Stop all economic activity in the region.
(C) Accurately predict the exact date of the next disaster.
(D) Assign blame for the financial losses after a disaster.

96. Which is an example of a best practice in Gender-Sensitive Disaster Management?
(A) Assuming men do not suffer psychological trauma after disasters.
(B) Distributing hygiene kits that include sanitary items for women and girls.
(C) Having all-male teams conduct damage assessments in households.
(D) Locating water points in isolated, unlit areas.

97. The concept that disability arises from the interaction between a person with an impairment and attitudinal and environmental barriers is central to:
(A) The Medical Model of Disability.
(B) The Convention on the Rights of Persons with Disabilities (CRPD).
(C) The Charity Model of Disability.
(D) The Economic Model of Impairment.

98. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : The Indian Knowledge System offers valuable, context-specific strategies for DRR.
Reason (R) : Practices like constructing 'koti banal' earthquake-resistant houses in the Himalayas are based on generations of experience with local hazards and materials.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

99. A person living in a poorly constructed house on an unstable hillside is an example of high:
(A) Social vulnerability
(B) Economic resilience
(C) Physical vulnerability
(D) Coping capacity

100. One of the main challenges in making economic assessments of disaster losses is the difficulty in:
(A) counting the number of damaged buildings.
(B) calculating the cost of reconstruction materials.
(C) determining the population of the affected area.
(D) quantifying the value of lost ecosystem services.

NODIA

101. Which of the following is NOT a dimension of vulnerability?
(A) Social
(B) Economic
(C) Physical
(D) Chronological

102. An elderly-sensitive disaster management plan would specifically consider:
(A) The need for medications for chronic illnesses and mobility support.
(B) Providing physically demanding work opportunities in the recovery phase.
(C) Using complex, technology-based apps for all communications.

(D) The fact that all elderly people have similar needs and capacities.

103. Consider the following statements regarding children and disasters:
P. Disasters can interrupt education, with long-term consequences.
Q. Children are often more susceptible to diseases from contaminated water post-disaster.
R. The psychological trauma of a disaster can have lasting effects on a child's development.
S. Children lack any form of resilience or coping mechanisms.
T. A child's nutritional needs are the same as an adult's during an emergency.
Which combination of the above statements is correct?
(A) P, Q, and R only
(B) Q, R, S, and T only
(C) P, S, and T only
(D) All P, Q, R, S, and T

104. "Risk in Urban areas" is often exacerbated by:
(A) Low population density.
(B) The concentration of economic assets and critical infrastructure.
(C) Strong enforcement of zoning laws.
(D) The presence of large, well-maintained open spaces for evacuation.

105. Documenting local indicators for floods, such as the behavior of riverine insects or specific cloud formations, is a part of:
(A) Disability inclusive DRR
(B) Gender-sensitive DM
(C) The Indian knowledge system for early warning
(D) Economic assessment of disaster losses

106. Match List I with List II and select the correct option.
List I: (Concept)
P. Intersectionality
Q. Cascading Impact
R. Disaster Resilient Infrastructure
S. Livelihood and DRR
List II: (Example)
1. A coastal farmer also runs a small shop inland.
2. A bridge built to withstand Category 5 cyclone winds.
3. An earthquake damages the power grid, which shuts down hospital equipment.
4. A poor, disabled woman in a remote village facing multiple layers of risk.
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-2, S-1
(C) P-3, Q-4, R-1, S-2
(D) P-4, Q-1, R-2, S-3

107. Which statement accurately reflects the relationship between poverty and DRR?
(A) Poverty alleviation is a form of long-term disaster risk reduction.
(B) DRR is a separate field and has no connection to poverty.
(C) People living in poverty are generally more resilient because they are used to hardship.
(D) Investing in DRR has no impact on poverty levels.

108. Which is a significant issue concerning women's work and livelihood in the post-disaster phase?
(A) Women are often the first to be hired in skilled reconstruction jobs.
(B) The burden of unpaid care work on women decreases significantly.
(C) Women may lose assets and tools related to home-based enterprises, with little access to credit to restart them.
(D) Gender wage gaps are typically eliminated during post-disaster reconstruction.

109. What is the fundamental principle of a "Child-Sensitive" approach to disaster management?
(A) To understand and respond to the unique vulnerabilities and needs of children at different stages of their development.
(B) To ensure children are kept separate from their families for safety.
(C) To provide children with the same relief packages as adults.
(D) To assume that all children will cope with disasters in the same way.

110. Arrange the following from the broadest international agreement to a specific national legislative provision.
P. Disability issues in the disaster cycle mentioned in a national DM plan.
Q. The Convention on the Rights of Persons

Downloaded from www.pdf.tube

with Disabilities (CRPD).
R. The Rights of Persons with Disabilities Act (2016) in India.
(A) Q, R, P
(B) R, Q, P
(C) P, R, Q
(D) Q, P, R

111. The term "handicap" is distinguished from "disability" in that handicap refers to:
(A) the medical condition itself.
(B) the inability to perform an activity.
(C) the social or environmental disadvantage experienced by the individual.
(D) a temporary impairment.

112. The construction of poorly planned embankments along a river is a developmental activity that can increase the risk of:
(A) Earthquakes
(B) Catastrophic flooding if the embankment breaches
(C) Droughts
(D) Wildfires

113. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : It is challenging to make precise economic assessments of disaster losses.
Reason (R) : It is difficult to assign a monetary value to intangible losses such as human lives, cultural heritage, and psychological trauma.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

114. The concept of "differential vulnerability" is best illustrated by which of the following scenarios?
(A) A cyclone strikes a coastal area, causing widespread damage.
(B) A government issues a cyclone warning for three coastal states.
(C) An earthquake is measured as 7.2 on the Richter scale.
(D) In the same flooded village, a wealthy family evacuates in their car while a poor family is trapped on their roof.

115. A key principle of gender-inclusive DRR is to:
(A) Ensure data collected after a disaster is disaggregated by sex and age.
(B) Create separate disaster management plans for men and women.
(C) Provide leadership roles in DRR exclusively to women.
(D) Assume that gender roles remain static during and after a disaster.

116. Consider the following statements about shanty settlements:
P. They are a feature of rapid, unplanned urbanization.
Q. Residents often lack legal title to their land, making them vulnerable to eviction.
R. They are typically built on hazardous land, such as floodplains or steep slopes.
S. Housing is generally constructed with high-quality, disaster-resistant materials.
Which combination of the above statements is correct?
(A) P and S only
(B) Q and R only
(C) P, Q, and R only
(D) P, Q, R, and S

117. Which of the following is an example of a coping strategy for a Person with Disability (PwD) during an emergency?
(A) Waiting passively for external help to arrive without any personal plan.
(B) Relying on a pre-established personal support network for assistance.
(C) Ignoring early warning messages.
(D) Attempting to navigate a blocked evacuation route alone.

118. The "Medical Model" of disability views disability as:
(A) an individual deficit or problem that needs to be fixed or cured.
(B) a social construct.
(C) a consequence of environmental barriers.
(D) a human rights issue.

NODIA

119. A primary focus of the economic aspects of disasters is to:
(A) Identify which natural disasters are most common.
(B) Analyze the gendered impacts of disasters.

137. Which of the following is a basic concept in Child-Centered DRR?
(A) Children should be protected but not participate in DRR activities.
(B) Children's coping strategies and resilience should be recognized and supported.
(C) Children's needs are secondary to those of adults during an emergency.
(D) Schools are not important in the context of DRR.

138. Consider the following statements regarding disability models and terms:
P. The RPD Act (2016) mandates inclusion of PwD in disaster management.
Q. The CRPD is a global treaty concerning the rights of persons with disabilities.
R. The Social Model of disability focuses on fixing the individual's impairment.
S. A 'handicap' is a disadvantage resulting from an impairment or disability.
Which combination of the above statements is correct?
(A) P and R only
(B) P, Q, and S only
(C) Q, R, and S only
(D) P, Q, R, and S

139. How do shanty settlements increase the vulnerability of a city?
(A) By contributing to the formal economy and tax base.
(B) By being located in safe, well-serviced areas.
(C) By concentrating populations in high-risk zones with inadequate infrastructure and services.
(D) By adhering to strict building codes and urban planning regulations.

140. Which literary sources in India might contain information about past disasters and traditional coping mechanisms?
(A) Modern scientific journals only.
(B) Government gazettes and policy documents only.
(C) Ancient epics, puranas, and regional folklore.
(D) International disaster reports.

141. The ability of a local government to absorb disaster losses using its own financial reserves is a measure of its:
(A) Financial capacity
(B) Financial vulnerability
(C) Debt ratio
(D) Population density

142. A post-disaster program that trains women in non-traditional skills like masonry to help in reconstruction is a best practice in:
(A) Elderly-sensitive DM
(B) Child-inclusive DM
(C) Gender-inclusive livelihood recovery
(D) Disability-inclusive evacuation

143. Match List I with List II and select the correct option.
List I: (Term)
P. Resilience
Q. Vulnerability
R. Coping Capacity
S. Hazard
List II: (Definition)
1. The characteristics and circumstances of a community that make it susceptible to the damaging effects of a hazard.
2. The ability of people and systems to face and manage adverse conditions, using available skills and resources.
3. A dangerous phenomenon or event that may cause loss of life, injury, or other health impacts.
4. The ability of a system to absorb, accommodate, adapt to, transform, or recover from the effects of a hazard.
(A) P-1, Q-4, R-3, S-2
(B) P-4, Q-1, R-2, S-3
(C) P-3, Q-2, R-1, S-4
(D) P-4, Q-2, R-1, S-3

144. One of the primary vulnerabilities of elderly people in a disaster is:
(A) their tendency to embrace new technologies for information.
(B) their potential social isolation and dependence on others for assistance.
(C) their physical fitness and ability to move quickly.
(D) their lack of life experience in dealing with crises.

Click Here to Buy book on Amazon

(C) A gender-sensitive disaster management practice.
(D) A component of the Indian Knowledge System for managing natural resources.

128. In the context of "Poverty, Livelihood and Disasters," which statement is most accurate?
(A) Poverty is a result of disasters, not a contributing factor to vulnerability.
(B) Livelihood programs are irrelevant to disaster management.
(C) Only cash-based livelihoods are affected by disasters.
(D) Protecting and strengthening livelihoods is a critical component of DRR for the poor.

129. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : Urban areas, despite being centers of wealth and development, often concentrate disaster risk.
Reason (R) : The high density of population, buildings, and critical infrastructure means that a single hazard event can cause massive and complex damage.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

130. A key aspect of "sustainable development" that links it to disaster risk is its emphasis on:
(A) environmental stewardship and social equity.
(B) rapid, unchecked industrial growth.
(C) short-term economic gains.
(D) dependence on non-renewable resources.

131. Which of the following is NOT a recognized type of disability?
(A) Physical disability
(B) Mental illness
(C) Intellectual disability
(D) Social disability

132. The process of modifying a building's structure to make it more resistant to hazards like earthquakes is known as:
(A) Rehabilitation
(B) Retrofitting
(C) Rezoning
(D) Reconstruction

133. Which of the following represents an indirect cost of a disaster?
(A) The cost of repairing a damaged bridge.
(B) The cost of rebuilding a destroyed school.
(C) The cost of emergency medical supplies.
(D) The loss of tourism revenue for a region in the months following a hurricane.

134. Arrange the following steps for a disability-inclusive search, rescue, and evacuation process in a logical order.
P. Use of accessible transport for evacuation.
Q. Identification of PwD and their specific needs in a community.
R. Training of rescue teams on how to assist PwD without causing injury.
S. Dissemination of warnings in multiple accessible formats.
(A) Q, S, R, P
(B) S, Q, P, R
(C) R, P, S, Q
(D) P, R, Q, S

135. The concept of "intersectionality" helps disaster managers understand that:
(A) all women are equally vulnerable in a disaster.
(B) an individual's risk is shaped by a single factor, such as poverty.
(C) a combination of factors, like being elderly, female, and from a minority group, creates unique and heightened vulnerabilities.
(D) physical location is the only determinant of vulnerability.

136. The primary objective of providing gender-sensitive psychosocial support after a disaster is to:
(A) acknowledge that men and women may experience and express trauma differently.
(B) provide support only to women and children.
(C) focus on the economic recovery of the household.
(D) rebuild damaged infrastructure.

NODIA

(C) Measure the direct and indirect financial costs of disasters.
(D) Study the psychological impact on survivors.

120. Which of the following is a dimension affecting vulnerability?
(A) Religion
(B) Political affiliation
(C) Astrological sign
(D) Favorite color

121. The main reason for having an Elderly-Inclusive and Elderly-Sensitive disaster management is that older people:
(A) are a homogenous group with uniform needs.
(B) often have unique health, mobility, and social vulnerabilities that need specific attention.
(C) are always taken care of by their families and need no external support.
(D) possess the highest capacity to respond to disasters among all age groups.

122. Match List I with List II and select the correct option.
List I: (Action)
P. Involving women in the design of shelters.
Q. Creating picture-based warning messages for children.
R. Building ramps into evacuation centers.
S. Setting up a buddy system for older adults living alone.
List II: (Type of DM Practice)
1. Disability-Inclusive DM
2. Elderly-Inclusive DM
3. Gender-Sensitive DM
4. Child-Sensitive DM
(A) P-3, Q-4, R-1, S-2
(B) P-4, Q-3, R-2, S-1
(C) P-1, Q-2, R-3, S-4
(D) P-3, Q-1, R-4, S-2

123. The loss of standing crops due to a drought is an example of a:
(A) Direct cost
(B) Indirect cost
(C) Secondary benefit
(D) Welfare loss

124. What does the term "cascading vulnerabilities" imply?
(A) Specific types of community vulnerabilities that are observed to be decreasing steadily over time.
(B) A type of infrastructure system designed to fail sequentially to protect the essential core.
(C) A standardized methodology for ranking various vulnerabilities from the most to the least important.
(D) The interaction of different vulnerabilities that creates a more complex and severe risk profile.

125. Which of the following is a key element of Child-Centered DRR?
(A) Recognizing children as agents of change who can promote a culture of safety.
(B) Focusing solely on providing food and water to children.
(C) Excluding children from all discussions about disaster preparedness.
(D) Assuming all children experience and react to disasters identically.

126. Consider the following aspects of a disaster management framework:
P. Specific measures for the inclusion of persons with disabilities.
Q. Guidelines for making early warnings accessible.
R. Provisions for protection and safety in humanitarian emergencies.
S. Active involvement of disabled persons' organizations (DPOs).
T. The assumption that disability is a private family matter.
Which of these are promoted by modern Disability and Disaster frameworks like CRPD and the RPD Act 2016?
(A) P, Q, R, and S only
(B) Q, R, and T only
(C) P, S, and T only
(D) All P, Q, R, S, and T

127. The use of 'ghuls' (traditional water channels) in arid regions of India for managing water resources is an example of:
(A) A modern irrigation technique.
(B) A cause of increased flood risk.

Downloaded from www.pdf.tube

145. A key guideline for accessibility in disability-inclusive shelter management is:
(A) ensuring all information is provided in audio format only.
(B) providing pathways, entrances, and sanitation facilities that are usable by people with mobility impairments.
(C) locating shelters on the top floors of buildings for safety.
(D) using standard-sized cots for everyone.

146. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : The impact of development projects, such as mining or deforestation, can increase disaster vulnerabilities.
Reason (R) : Such projects alter the natural environment, potentially destabilizing slopes, increasing erosion, and reducing the land's capacity to absorb heavy rainfall.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

147. A core issue in urban planning for risk reduction in India is:
(A) the lack of population in cities.
(B) the challenge of enforcing land-use regulations and building codes in the face of rapid, often informal, growth.
(C) the overabundance of green spaces that pose a fire risk.
(D) the absence of any economic activity to protect.

148. Which factor is NOT typically a basis for differential vulnerability?
(A) Class
(B) Gender
(C) Personal preference
(D) Age

149. In the context of the disaster cycle, where do gender differentials manifest?
(A) In all phases: preparedness, response, recovery, and mitigation.
(B) Only in the response phase.
(C) Only in the recovery phase.
(D) Only in the preparedness phase.

150. Consider the following as components of a disaster management plan:
P. A list of vulnerable persons, including elderly and disabled individuals.
Q. Designated safe shelters with accessible facilities.
R. A communication plan using multiple formats (sirens, SMS, TV, door-to-door).
S. A stockpile of generic, one-size-fits-all relief supplies.
T. A post-disaster plan that only focuses on rebuilding infrastructure without social programs.
Which combination of components would constitute a more inclusive and effective plan?
(A) P, Q, and R only
(B) S and T only
(C) P, S, and T only
(D) All P, Q, R, S, and T

151. Why is it important to have Child-Inclusive and Child-Sensitive Disaster Management?
(A) Because children constitute a significant and uniquely vulnerable portion of the population.
(B) Because children are responsible for causing disasters.
(C) Because international law requires it, but it has little practical effect.
(D) Because children can manage disaster response better than adults.

152. Which of the following is a best practice in Disability-Inclusive risk reduction?
(A) Resilience in PwD is often demonstrated through their well-developed problem-solving skills and personal coping mechanisms.
(B) PwD have no resilience and are entirely dependent on others.
(C) The physical impairment of a person directly correlates to their lack of psychological resilience.
(D) Resilience for PwD is measured by their ability to perform physical rescue work.

153. A key initiative for risk reduction in India's urban areas involves:

NODIA

206. A key reason for the vulnerability of children during disasters is their:
(A) physical and psychological dependency on caregivers.
(B) innate ability to find food and shelter independently.
(C) high level of understanding of complex risks.
(D) responsibility for making household decisions.

207. A post-disaster needs assessment that collects data on the different impacts on men, women, boys, and girls is following the principle of:
(A) Disability Inclusion
(B) Economic Valuation
(C) Infrastructure Resilience
(D) Age and Gender Disaggregation

208. Consider the following statements about elderly people in disasters:
P. They may be reluctant to evacuate due to strong attachment to their homes.
Q. Chronic health issues can be exacerbated by the stress and lack of medical care.
R. They represent a repository of traditional knowledge that can be useful for DRR.
S. They are a homogenous group, and one policy fits all.
Which combination of the above statements is correct?
(A) P and S only
(B) Q, R, and S only
(C) P, Q, and R only
(D) P, Q, R, and S

209. The primary goal of identifying PwD in a community before a disaster is to:
(A) segregate them from the rest of the community.
(B) understand their specific needs for warning, evacuation, and shelter to plan an inclusive response.
(C) exclude them from community preparedness activities.
(D) register them for post-disaster financial aid only.

210. How does a change in land use, such as urbanization, affect disaster risk?
(A) It always decreases risk by creating more wealth.
(B) It can increase risk by replacing permeable surfaces with impermeable ones, leading to more runoff and flooding.
(C) It has no effect on natural hazards.
(D) It only affects the risk of earthquakes.

211. Which of the following is a global best practice learned for effective DRR?
(A) Promoting a multi-stakeholder approach involving government, civil society, the private sector, and communities.
(B) Centralizing all decision-making without community input.
(C) Focusing solely on technological solutions while ignoring social vulnerabilities.
(D) Keeping disaster management plans secret from the public.

212. A family that loses its primary income earner in a disaster faces a severe setback to its:
(A) Livelihood security
(B) Political influence
(C) Social status
(D) Physical infrastructure

213. Caste-based discrimination in access to relief supplies or community shelters violates the principle of:
(A) economic efficiency.
(B) equitable and impartial humanitarian assistance.
(C) top-down management.
(D) sustainable development.

214. The existence of separate entry queues for men and women at a relief distribution point, without addressing women's safety in the queue, is an example of:
(A) a gender-inclusive practice.
(B) a gender-blind practice that may not be gender-sensitive.
(C) a best practice in gender mainstreaming.
(D) an effective way to empower women.

215. The increased psychosocial distress among children who have witnessed a disaster is a key concern related to their:
(A) physical growth.
(B) resilience and coping ability.
(C) educational attainment.

Click Here to Buy book on Amazon

162. Which of the following is an example of a global best practice in disaster management that has been widely adopted?
(A) The universal adoption of community-based disaster risk management (CBDRM).
(B) The exclusive use of top-down, command-and-control systems.
(C) Ignoring the role of women and children in disaster planning.
(D) Focusing recovery efforts only on economic infrastructure.

163. When a region's economy is heavily dependent on a single industry, like agriculture, that is vulnerable to a specific hazard, like drought, it is an example of:
(A) regional financial resilience.
(B) regional financial vulnerability.
(C) a diversified local economy.
(D) sustainable development.

164. The primary aim of protecting livelihoods in the context of DRR is to:
(A) provide permanent government jobs to everyone.
(B) ensure that people can meet their basic needs and recover more quickly after a disaster.
(C) focus only on the livelihoods of the wealthy.
(D) transition everyone to a non-agricultural economy.

165. A person's vulnerability to a disaster is NOT a fixed state but a dynamic condition. This means it:
(A) can change over time due to factors like income, health, or policy changes.
(B) is determined at birth and never changes.
(C) is the same for every person in a community.
(D) is only relevant during a disaster event itself.

166. Which statement best defines 'gendered vulnerability'?
(A) It acknowledges that gender roles and social structures create different types of risks and disadvantages for men and women in disasters.
(B) It means that only women are vulnerable to disasters.
(C) It refers to the specific biological weaknesses of men and women.
(D) It is a concept that is only relevant in Western countries.

167. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : It is critical to address the specific vulnerabilities of children in disaster management.
Reason (R) : Children's physical, physiological, and psychological development stages make them uniquely susceptible to harm, and the impacts can have long-lasting consequences.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

168. The social model of disability suggests that the solution to the "problem" of disability lies in:
(A) medical treatment and rehabilitation of the individual.
(B) providing charity and institutional care.
(C) removing societal barriers to ensure full participation and inclusion.
(D) genetic screening to prevent impairments.

169. Consider the following approaches for disaster risk reduction:
P. Constructing earthquake-resistant buildings.
Q. Protecting and restoring mangrove forests to reduce storm surge impact.
R. Disseminating early warnings for cyclones.
S. Conducting community evacuation drills.
T. Ignoring local knowledge about past hazard events.
Which combination of the above approaches contributes positively to DRR?
(A) P, Q, R, and S only
(B) Q, R, S, and T only
(C) P, R, and T only
(D) All P, Q, R, S, and T

170. Which of the following is a direct cost of a disaster?
(A) Decline in GDP growth in the year following the disaster.
(B) The cost of psychological counseling for

Downloaded from www.pdf.tube

survivors.
(C) The monetary value of a destroyed highway.
(D) The loss of tax revenue due to business closures.

171. The loss of social cohesion and cultural practices in a community displaced by a disaster is best categorized as a:
(A) Direct cost
(B) Indirect cost
(C) Welfare loss
(D) Financial benefit

172. The relationship between poverty and disasters is often described as a vicious cycle because:
(A) disasters cause poverty, and poverty increases vulnerability to future disasters.
(B) rich people cause disasters that make poor people poorer.
(C) disaster relief always leads to long-term poverty.
(D) poverty and disaster risk are unrelated phenomena.

173. What is a "cascading impact" in the context of disasters?
(A) A chain reaction where one failure triggers another, such as a flood causing a power outage, which then disrupts water supply.
(B) A single, isolated event with no follow-on effects.
(C) The gradual reduction of disaster risk over time.
(D) The financial cost of a waterfall-related disaster.

174. Which of the following is a specific vulnerability of children in the disaster cycle?
(A) Increased risk of separation from family and trafficking.
(B) Access to high-level decision-making roles.
(C) Financial independence and control over assets.
(D) Extensive life experience in coping with crises.

175. The Rights of Persons with Disabilities Act (2016) is significant for DRR in India because it:
(A) legally mandates the inclusion of disability concerns in disaster management activities.
(B) provides a framework for international aid for disability.
(C) focuses only on the employment of PwD in normal circumstances.
(D) is a suggestive guideline with no legal force.

176. Match List I with List II and select the correct option.
List I: (Urban Risk Issue)
P. Vulnerability of shanty settlements
Q. Issues in urban planning
R. Risk in urban areas
S. Disaster Resilient Infrastructure
List II: (Example)
1. A hospital retrofitted to remain functional after an earthquake.
2. Concentration of high-value assets exposed to a single hazard.
3. Failure to enforce building codes in a seismic zone.
4. Informal housing built on a landslide-prone slope.
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-2, S-1
(C) P-3, Q-4, R-1, S-2
(D) P-4, Q-1, R-2, S-3

177. An example of Indian traditional knowledge for early warning is:
(A) The use of Doppler radar for cyclone tracking.
(B) Observing the unusual behavior of ants or termites to predict heavy rain.
(C) Satellite-based GPS systems for monitoring tectonic plate movement.
(D) Computer simulations of flood inundation.

178. What is the primary difference between a direct and an indirect economic cost of a disaster?
(A) Direct costs affect the public sector, while indirect costs affect the private sector.
(B) Direct costs relate to the physical damage of assets, while indirect costs relate to the flow-on effects on the economy.
(C) Direct costs are insured, while indirect costs are uninsured.
(D) Direct costs are immediate, while indirect costs only appear decades later.

179. A gender-sensitive approach to disaster management would do which of the following?
(A) Assume that men and women have the

NODIA

same needs for health services post-disaster.
(B) Acknowledge that women's and men's coping strategies might differ and support both.
(C) Distribute all information and resources through male community leaders only.
(D) Design shelters without considering privacy or safety for women.

180. The primary vulnerability of elderly individuals related to early warnings is:
(A) their refusal to believe that disasters can happen.
(B) potential sensory impairments (hearing, vision) or social isolation that prevents them from receiving the warning.
(C) their over-reliance on social media for information.
(D) their ability to quickly process and act on complex information.

181. Which of the following is a key step in Disability Inclusive Rehabilitation?
(A) Providing assistive devices like wheelchairs or prosthetics as needed.
(B) Creating segregated rehabilitation centers far from the community.
(C) Focusing only on physical therapy and ignoring psychosocial support.
(D) Assuming that rehabilitation needs are the same for everyone.

182. A development project that clears a large mangrove forest to build a port is an example of a development choice that:
(A) increases the vulnerability of the coastal area to storms and tsunamis.
(B) increases the resilience of the coastline to storm surges.
(C) is a prime example of sustainable development.
(D) has no impact on disaster risk.

183. Consider the following statements about Indian Knowledge Systems in DM:
P. They include traditional architectural practices that are hazard-resistant.
Q. They encompass local knowledge of medicinal plants for post-disaster health issues.
R. They are static and have not evolved over time.
S. They are often dismissed as unscientific and irrelevant in modern DM.
Which combination of the above statements is correct regarding the potential and challenges of IKS?
(A) P and Q only
(B) P, Q, and S only
(C) R and S only
(D) P, Q, R, and S

184. The concept of 'livelihood' in the context of DRR refers to:
(A) only the salaried job of a person.
(B) the amount of cash relief received after a disaster.
(C) the infrastructure of a city.
(D) the capabilities, assets, and activities required for a means of living.

185. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : Intersectionality is a vital concept for a nuanced understanding of disaster vulnerability.
Reason (R) : A person's identity is one-dimensional, and therefore vulnerability can be assessed based on a single factor like gender or class.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

186. The special attention given to pregnant women, lactating mothers, and adolescent girls in relief camps is a practice derived from:
(A) Gender-sensitive disaster management.
(B) Disability-sensitive disaster management.
(C) Economic aspects of disasters.
(D) Urban planning principles.

187. Re-establishing schools and creating temporary learning centers quickly after a disaster is a best practice in:
(A) Elderly-sensitive DM
(B) Child-inclusive and Child-sensitive DM
(C) Disability-inclusive DM

Click Here to Buy book on Amazon

226. What does "Disability inclusive DRR" primarily advocate for?
(A) The meaningful participation of PwD in all aspects of DRR.
(B) The creation of separate institutions for PwD during disasters.
(C) Viewing PwD only as helpless victims.
(D) Focusing DRR efforts solely on people without disabilities.

227. A city's initiative to map its critical infrastructure (hospitals, power plants, water supply) against hazard maps (flood zones, seismic zones) is a crucial step in:
(A) understanding urban risk.
(B) promoting shanty settlements.
(C) calculating welfare losses.
(D) studying Indian knowledge systems.

228. Which of the following is an example of a livelihood preference as a part of the Indian Knowledge System?
(A) A software engineer working remotely for a multinational company.
(B) A factory worker in a large industrial city.
(C) A stock market trader.
(D) A pastoralist community that migrates with its livestock based on seasonal patterns to avoid drought.

229. The cost of lost wages for workers because their factory is closed for repairs after a flood is a(n):
(A) Direct cost
(B) Indirect cost
(C) Welfare loss
(D) Development gain

230. A family living in poverty is more vulnerable to a food shortage caused by drought because they are less likely to have:
(A) access to early warnings.
(B) a surplus of food or savings to rely on.
(C) a strong social network.
(D) traditional knowledge.

231. Differential vulnerability based on location is best exemplified by:
(A) a person living in a brick house versus a wooden house in the same location.
(B) a person living on high ground in the same town.
(C) a man versus a woman in the same household.
(D) a person living on a flood-prone riverbank versus a person living on high ground in the same town.

232. An important component of a "Gender-Sensitive" needs assessment is:
(A) interviewing only male heads of households.
(B) assuming the needs of men and women are identical.
(C) focusing only on the number of people affected, without considering gender.
(D) using separate focus groups for men and women to understand their unique problems and needs.

233. A key 'best practice' in Child-Sensitive DM is the establishment of 'Child-Friendly Spaces' in camps, which serve to:
(A) provide a safe environment for play, informal education, and psychosocial support.
(B) permanently separate children from their parents.
(C) train children for search and rescue operations.
(D) serve as a distribution point for adult rations.

234. The primary vulnerability of older people in the disaster recovery phase is:
(A) their ability to quickly find new employment.
(B) their preference for living in temporary shelters.
(C) their lack of any pre-existing health conditions.
(D) the difficulty they may face in navigating bureaucracy to access compensation and support.

235. The Rights of Persons with Disabilities Act (2016) is important for disaster management because it provides a:
(A) financial grant for all PwD.
(B) medical classification of different types of impairments.
(C) legal framework for ensuring their inclusion and protection in disaster situations in India.
(D) set of guidelines for international response only.

NODIA

(B) Building concrete channels to speed up river flow.
(C) Filling up wetlands and ponds for construction.
(D) Preserving sacred groves, which also act as biodiversity reserves and help in soil and water conservation.

198. A 'welfare loss' in the economic assessment of disasters refers to:
(A) the cost of rebuilding a bridge.
(B) the loss of business income.
(C) the increased psychological stress and trauma in an affected population.
(D) the cost of humanitarian aid.

199. A primary goal of integrating DRR with livelihood protection is to:
(A) make livelihoods more resilient to hazards.
(B) shift all populations to urban centers.
(C) provide permanent government subsidies.
(D) focus only on industrial livelihoods.

200. Match List I with List II and select the correct option.
List I: (Vulnerable Group)
P. Persons with Disabilities
Q. Women
R. Elderly
S. Children
List II: (Specific DRR Action)
1. Establishing secure and well-lit sanitation facilities in shelters.
2. Developing early warning messages in formats like large print and sign language.
3. Rapidly reopening schools and providing psychosocial support.
4. Ensuring access to chronic-care medications and mobility aids.
(A) P-1, Q-2, R-3, S-4
(B) P-2, Q-1, R-4, S-3
(C) P-3, Q-4, R-1, S-2
(D) P-2, Q-3, R-4, S-1

201. Which factor contributes to the differential vulnerability of people based on their religion?
(A) Religious beliefs influencing risk perception and behavior (e.g., fatalism).
(B) Religious affiliation having no impact on social networks or support systems.
(C) All religions mandating the same disaster response actions.
(D) The physical location of places of worship.

202. Which of the following is a coping strategy and a sign of resilience in women post-disaster?
(A) Passively waiting for aid to be distributed.
(B) Forming informal support groups to share resources, childcare, and emotional support.
(C) Falling into deep depression and inaction.
(D) Abandoning their families and responsibilities.

203. The concept of "disability-sensitive" disaster management implies:
(A) being aware of the existence of PwD but not changing any procedures.
(B) understanding and taking into account the specific needs and barriers faced by PwD in all DM activities.
(C) creating separate, parallel disaster management systems just for PwD.
(D) focusing only on one type of disability, such as mobility impairment.

204. "Vulnerability in the city" is often characterized by:
(A) a uniformly low level of risk for all residents.
(B) pockets of extreme vulnerability, such as in informal settlements, existing alongside areas of high resilience.
(C) the complete absence of critical infrastructure.
(D) a lack of economic assets that could be damaged.

205. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : The costs of disasters extend beyond the immediate physical damage.
Reason (R) : Indirect costs, such as business interruption, and welfare losses, such as psychological trauma, constitute a significant part of the total impact of a disaster.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

Downloaded from www.pdf.tube

(D) Gender-sensitive DM

188. Arrange the following logically in the context of disability conceptualization and response.
P. A person cannot get a job because employers assume they are unproductive.
Q. A person has a visual impairment (low vision).
R. The person cannot read standard-sized print.
(A) Q, R, P
(B) P, Q, R
(C) R, P, Q
(D) Q, P, R

189. Which of the following is a key characteristic of Disaster Resilient Infrastructure?
(A) Fragility
(B) Low initial cost
(C) Inflexibility
(D) Robustness and Redundancy

190. One of the global best practices in DRR is the shift from a post-disaster response focus to:
(A) a focus solely on reconstruction.
(B) a pre-disaster focus on risk reduction, mitigation, and preparedness.
(C) a focus only on international aid.
(D) a focus on managing only one type of hazard.

191. A key challenge for local governments in addressing natural disasters is:
(A) an excess of available funds.
(B) a lack of disasters to plan for.
(C) a population that is not vulnerable.
(D) balancing the immediate costs of DRR measures against other pressing public service needs.

192. Which statement best connects poverty to disaster vulnerability?
(A) Poverty leads to choices that increase risk, such as living in unsafe housing, because no other options are available.
(B) Poor people are inherently less capable of making good decisions.
(C) Wealthy people do not experience disasters.
(D) Poverty is completely unrelated to where a person lives or the quality of their house.

193. The dimension of vulnerability that relates to social hierarchies, like the caste system, is:
(A) Physical vulnerability
(B) Economic vulnerability
(C) Social vulnerability
(D) Environmental vulnerability

194. The term 'gender differentials' in the disaster cycle refers to the fact that:
(A) men and women are impacted differently and have different capacities at each stage of a disaster.
(B) only women are impacted by disasters.
(C) men are always more resilient than women.
(D) gender is only a factor in the recovery stage.

195. Consider the following actions for a disaster response:
P. Ensuring unaccompanied minors are identified and protected.
Q. Providing psychosocial support through play and art therapy.
R. Distributing infant formula without instructions or clean water.
S. Setting up temporary learning spaces.
T. Ignoring children's opinions in camp management.
Which combination of actions reflects child-sensitive best practices?
(A) P, Q, and S only
(B) R, S, and T only
(C) P, R, and S only
(D) All P, Q, R, S, and T

196. A key feature of the Convention on the Rights of Persons with Disabilities (CRPD), particularly Article 11, is:
(A) the exclusion of PwD from disaster management planning.
(B) the obligation of states to ensure the protection and safety of PwD in situations of risk.
(C) the suggestion that disability is a purely medical issue.
(D) the mandate to institutionalize all persons with disabilities.

197. Which of the following is an example of managing natural resources to reduce disaster risks, based on traditional knowledge?
(A) Clearing forests to expand agriculture.

NODIA

(D) future employment.

216. Which of the following demonstrates an 'intersectionality' perspective?
(A) Analyzing the vulnerability of all women as a single group.
(B) Analyzing the vulnerability of all people with disabilities as a single group.
(C) Analyzing the unique vulnerability of a disabled woman from a low-income household.
(D) Analyzing vulnerability based only on geographic location.

217. A significant coping strategy for elderly individuals in disasters is often their:
(A) ability to run long distances.
(B) use of sophisticated technology.
(C) extensive social networks and life experience.
(D) physical strength.

218. According to the Social Model of Disability, what is the main 'disabling' factor for a wheelchair user facing a building with only stairs?
(A) The person's inability to walk.
(B) The building's inaccessible design.
(C) The high cost of wheelchairs.
(D) The lack of medical treatment for the person's impairment.

219. The concept of 'Disaster Resilient Infrastructure' involves creating systems that are:
(A) rigid and unchangeable.
(B) able to withstand, adapt to, and recover quickly from shocks.
(C) built at the lowest possible price.
(D) independent of each other.

220. The collection of folk songs and stories about past famines and how communities survived is a part of:
(A) the economic assessment of disasters.
(B) disability-inclusive DRR.
(C) a literary and cultural source within the Indian Knowledge System.
(D) gender-sensitive shelter management.

221. A major challenge in making economic assessments of disaster losses is the difficulty in accounting for:
(A) losses in the non-formal or 'grey' economy.
(B) the replacement cost of public buildings.
(C) the number of fatalities.
(D) the geographical area affected.

222. The relationship between poverty and disasters is such that:
(A) DRR efforts can be an effective tool for poverty alleviation.
(B) poverty is a sign of resilience to disasters.
(C) disasters only affect the poor.
(D) poverty and disaster risk are not linked.

223. Which of the following actions is a key element of a gender-inclusive disaster risk management?
(A) Ensuring women's equal participation in community disaster management committees.
(B) Providing relief materials only to men.
(C) Creating relief packages without considering the specific hygiene needs of women.
(D) Ignoring the increase in domestic violence post-disaster.

224. Which statement about the vulnerability of children in disasters is INCORRECT?
(A) They are more susceptible to disease from contaminated water.
(B) The trauma of a disaster can have long-term psychological effects.
(C) They have the same coping capacities and resilience as adults.
(D) Disruption to education can have lifelong consequences.

225. In the following question, a statement of Assertion (A) is followed by a statement of Reason (R).
Assertion (A) : Persons with Disabilities (PwD) are often disproportionately affected by disasters.
Reason (R) : Barriers to information, evacuation, and access to services, coupled with the loss of assistive devices, significantly increase their vulnerability.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

Click Here to Buy book on Amazon

(A) encouraging the growth of shanty settlements.
(B) promoting the integration of disaster risk management into urban development planning.
(C) dismantling early warning systems to save costs.
(D) ignoring building codes to promote faster construction.

154. Distinctive settlement patterns, such as clustered housing in desert regions to create shade, represent:
(A) poor planning.
(B) a form of traditional knowledge for climate adaptation.
(C) a factor increasing vulnerability to floods.
(D) a modern architectural trend.

155. A significant challenge in making economic assessments of disasters is the "problem of valuation," which refers to:
(A) difficulty in assigning a monetary figure to non-market goods like a clean environment or a human life.
(B) valuing the cost of replacement materials.
(C) the fluctuating exchange rate of the local currency.
(D) counting the number of people affected.

156. The link between poverty and DRR is founded on the understanding that:
(A) poverty reduction and disaster risk reduction are mutually supportive goals.
(B) wealthy people are never affected by disasters.
(C) poverty is solely an economic issue with no social dimensions.
(D) disaster management should only focus on protecting assets, not people.

157. An example of a gender-sensitive best practice in disaster recovery is:
(A) providing cash-for-work programs only for men.
(B) ensuring that women are included in committees that decide on resource allocation for rebuilding.
(C) rebuilding houses without consulting the women who manage them daily.
(D) distributing land titles for new housing only to male heads of households.

158. The disruption of regular health services for children, such as immunization programs, due to a disaster is a critical issue. Which group of concerns does this primarily address?
(A) Economic aspects of disasters.
(B) Children and disasters.
(C) Indian knowledge systems.
(D) Disability frameworks.

159. A key aspect of an elderly-sensitive coping strategy is:
(A) reliance on high-tech gadgets which they may not know how to use.
(B) drawing on life experience and established social support networks.
(C) isolating themselves from the community to stay safe.
(D) engaging in physically strenuous activities to prove their independence.

160. Match List I with List II and select the correct option.
List I: (Disability Terminology)
P. Impairment
Q. Disability
R. Handicap
S. Accessibility Guideline
List II: (Correct Example)
1. A wheelchair user cannot enter a building because it only has stairs.
2. Spinal cord injury.
3. Building a ramp in addition to stairs.
4. Inability to walk due to a spinal cord injury.
(A) P-1, Q-2, R-4, S-3
(B) P-2, Q-4, R-1, S-3
(C) P-4, Q-1, R-3, S-2
(D) P-2, Q-1, R-4, S-3

161. An important principle of sustainable development is:
(A) prioritizing short-term profit over long-term environmental and social costs.
(B) recognizing the interconnectedness of economic, social, and environmental systems.
(C) exploiting natural resources as quickly as possible.
(D) ignoring the needs of future generations.

NODIA

236. The failure of urban planning is often evident in the aftermath of a disaster when:
(A) buildings constructed according to code remain standing.
(B) evacuation routes are clear and accessible to all.
(C) green spaces effectively absorb floodwater.
(D) essential services like hospitals are located in high-risk zones and become non-functional.

237. The 'coping strategies' within the Indian Knowledge System refer to:
(A) modern technological solutions imported from other countries.
(B) government-led response mechanisms.
(C) financial instruments like disaster bonds.
(D) time-tested local and community practices for dealing with familiar hazards.

238. Measuring the financial capacity of a local government to address natural disasters involves assessing its:
(A) ability to predict earthquakes.
(B) population size.
(C) geographical location.
(D) ability to mobilize financial resources (e.g., through reserves, credit, or aid) during and after a crisis.

239. Protecting and diversifying livelihood options is a key strategy for:
(A) increasing disaster risk.
(B) measuring direct disaster costs.
(C) implementing gender-blind policies.
(D) building economic resilience at the household and community level.

240. The concept of 'cascading vulnerabilities' is exemplified by:
(A) a single, isolated vulnerability, such as poor housing.
(B) the physical collapse of a waterfall.
(C) a systematic reduction in vulnerability over time.
(D) how poverty leads to poor nutrition, which in turn increases susceptibility to disease after a flood.

241. A disaster response that does not account for the different roles men and women play in a community is termed:
(A) Gender-sensitive
(B) Gender-blind
(C) Gender-inclusive
(D) Gender-transformative

242. Which of the following is a key element of an elderly-sensitive disaster preparedness plan?
(A) Assuming all older adults can read text messages on a smartphone.
(B) Planning for all evacuations to be on foot.
(C) Distributing standard relief kits with no provision for chronic medications.
(D) Creating a registry of older adults with specific needs (e.g., mobility, medical).

243. The provision of accessible Information, Education and Communication (IEC) material in DRR means:
(A) creating a single poster with complex text.
(B) broadcasting information only on paid satellite channels.
(C) sharing information only with community leaders.
(D) providing information in various formats like Braille, large print, audio, and simple language.

NODIA

244. A major development project like a new highway can inadvertently increase disaster risk by:
(A) improving transportation for evacuation.
(B) generating local employment.
(C) connecting remote areas to markets.
(D) creating new, unplanned settlements along its route in hazardous areas.

245. An 'indirect cost' of a disaster for a hotel owner would be:
(A) the cost of repairing the hotel's damaged roof.
(B) the loss of booking revenue for the next six months due to a decline in tourism.
(C) the cost of replacing broken furniture.
(D) the insurance premium paid before the disaster.

246. Which of the following is NOT a dimension that affects vulnerability?
(A) Caste
(B) Gender
(C) Disability
(D) Nationality for passport purposes

(A) The long-term development phase
(B) The pre-disaster mitigation planning phase
(C) The scientific research and analysis phase
(D) The chaotic evacuation and response phase

Direction : Please read the following source carefully.

Addressing disability in disaster contexts requires a nuanced understanding of key terminologies and frameworks. A distinction is often made between 'impairment' (a problem in body function or structure), 'disability' (a complex phenomenon reflecting the interaction between a person's body features and the features of the society in which they live), and 'handicap' (a disadvantage resulting from an impairment or disability that limits role fulfillment). The vulnerability of Persons with Disabilities (PwD) is significantly exacerbated during disasters, with differential impacts depending on the type of disability and the barriers present in the environment. The Convention on the Rights of Persons with Disabilities (CRPD) and national laws like the Rights of Persons with Disabilities Act (2016) in India mandate their inclusion and protection. A comprehensive Disability-Inclusive DRR approach involves several key actions: identifying PwD in the community, using accessible formats for Vulnerability and Capacity Assessment (VCA) and Early Warning Systems, planning for assisted search, rescue, and evacuation, and ensuring shelter management includes accessible infrastructure. It also requires that Information, Education, and Communication (IEC) materials are available in formats like Braille or sign language, and that rehabilitation services are integrated into recovery. This moves beyond mere sensitivity to an active, rights-based approach to disaster management.

Based on the above source, attempt the following five questions.

271. According to the paragraph, what does 'disability' as a concept reflect?
(A) Solely a medical problem or impairment in body function.
(B) A disadvantage that only limits the fulfillment of professional roles.
(C) The interaction between a person's physical features and societal barriers.
(D) A synonym for handicap, with no difference in meaning.

272. Which of the following is an example of a core component of Disability-Inclusive DRR?
(A) Creating a separate, isolated shelter exclusively for Persons with Disabilities.
(B) Using sign language interpreters and Braille for IEC materials.
(C) Developing early warning messages only in a standard text format.
(D) Assuming that families will provide all necessary support for PwD during evacuation.

273. The paragraph mentions the Rights of Persons with Disabilities Act (2016) to emphasize:
(A) the optional nature of including PwD in disaster planning.
(B) the international community's disinterest in disability issues.
(C) the focus of the act solely on employment and not disasters.
(D) the legal and rights-based mandate for disability inclusion in India.

274. What is the key difference between 'impairment' and 'handicap' as described in the source?
(A) Impairment is a problem in body function/structure, while handicap is the resulting social disadvantage.
(B) Impairment is a disadvantage in role fulfillment, while handicap is a problem with body structure.
(C) There is no difference; the terms are interchangeable.
(D) Impairment refers to mental issues, while handicap refers to physical issues.

275. The differential impact of disasters on PwD, as mentioned in the source, implies that:
(A) all persons with disabilities face the exact same challenges in a disaster.
(B) persons with disabilities are always more resilient than the general population.
(C) a person with a mobility impairment and a person with a hearing impairment will have different needs.
(D) disability-related needs are only relevant during the rehabilitation phase.

Direction : Please read the following source

Downloaded from www.pdf.tube

(A) multiple disasters occur simultaneously in different locations.
(B) all social groups are affected equally by a single disaster event.
(C) an initial shock leads to a series of subsequent and worsening impacts.
(D) a community's resilience increases after an initial disaster.

254. Which of the following scenarios best illustrates the concept of intersectionality as described in the paragraph?
(A) A wealthy businessman facing financial loss due to a flood
(B) A city-wide evacuation plan being implemented for all residents
(C) A young, able-bodied male student participating in rescue efforts
(D) A disabled, elderly woman from a religious minority group in a remote village facing a disaster

255. What is the key implication of understanding differential vulnerability and intersectionality for disaster management?
(A) To develop a universal, one-size-fits-all disaster response plan
(B) To focus exclusively on the economic impacts of disasters
(C) To design targeted and equitable interventions that address specific group needs
(D) To prioritize the vulnerabilities of one group over all others

Direction : Please read the following source carefully.

In the context of disaster management, a critical distinction must be made between 'sex', which refers to the biological attributes of individuals, and 'gender', which encompasses the socially constructed roles, responsibilities, and expectations assigned to men, women, and other gender identities. It is this social construction of gender that leads to gendered vulnerability, where societal norms and power dynamics differentially expose individuals to disaster risks and affect their capacity to respond. Across the disaster cycle—from preparedness and mitigation to response and recovery—these gender differentials are evident. For instance, women may be less likely to receive timely warnings due to limited access to information, or they may face increased risks of violence in post-disaster shelters. Conversely, men may be expected to undertake high-risk rescue activities. Coping strategies and resilience are also gendered; women often take on expanded caregiving roles and manage household resources under immense stress. Effective disaster management must therefore be both Gender-Inclusive, ensuring the participation of all genders in decision-making, and Gender-Sensitive, recognizing and actively addressing the distinct needs and vulnerabilities of different genders. Adopting best practices in this area involves collecting gender-disaggregated data and tackling systemic issues like women's work and livelihood security post-disaster.

Based on the above source, attempt the following five questions.

256. According to the paragraph, what is the primary origin of "gendered vulnerability" in disasters?
(A) The biological differences between men and women
(B) The socially constructed roles and expectations of gender
(C) The natural intensity of the disaster event itself
(D) The lack of financial resources in a community

257. Which of the following best describes a "Gender-Sensitive" approach to disaster management?
(A) Ensuring an equal number of men and women in shelters
(B) Assigning disaster response roles based on traditional gender expectations
(C) Focusing solely on the biological sex of affected individuals
(D) Recognizing and addressing the distinct needs and vulnerabilities of different genders

258. The paragraph suggests that gender differentials are evident across the entire disaster cycle. This implies that:
(A) gender roles and norms impact individuals from preparedness through to recovery.
(B) men and women face identical challenges during the recovery phase.
(C) gender considerations are only important

NODIA

247. What is a primary objective of a Gender-Inclusive approach in the recovery phase of a disaster?
(A) To ensure that both men and women have equal opportunities to access resources for rebuilding their livelihoods and homes.
(B) To provide assistance only to households headed by women.
(C) To focus reconstruction efforts on male-dominated industries.
(D) To rebuild everything exactly as it was before, reinforcing previous inequalities.

248. The vulnerability of children is heightened in disasters due to their dependence on adults, who may themselves be:
(A) always calm and resourceful.
(B) trained emergency responders.
(C) unaffected by the event.
(D) injured, distressed, or separated from the child.

249. Which of the following is a critical component of Disability-Inclusive Shelter Management?
(A) Ensuring shelters are physically accessible and have adequate support services for PwD.
(B) Placing all PwD in a separate, isolated section of the shelter.
(C) Assuming family members will provide all necessary support for PwD.
(D) Having no specific plans for residents with disabilities.

250. The integration of DRR into development planning is a key theme because:
(A) Unsustainable development increases disaster risk, while disasters can erode key development gains.
(B) Development and disasters are completely distinct issues that require different policies.
(C) Development projects are fundamentally the primary cause of all contemporary disasters.
(D) Disaster risk reduction measures are typically too expensive for standard development budgets.

Direction : Please read the following source carefully.

The vulnerability of a population to disasters is not uniform; it is shaped by a complex interplay of social, economic, and political factors. This concept, known as differential vulnerability, highlights how various groups within a society experience disaster risks and impacts differently. Factors such as caste, class, gender, age, location, disability, and religion are critical determinants of a person's or a community's susceptibility to harm and their capacity to cope and recover. These factors do not operate in isolation. The principle of intersectionality explains that an individual's identity, composed of multiple overlapping social categories, creates unique and compounded forms of vulnerability. For instance, an elderly woman from a lower-caste community living in a geographically isolated area faces a risk profile that is significantly greater than the sum of her individual vulnerabilities. This can lead to cascading vulnerabilities, where an initial shock triggers a series of subsequent, and often worsening, impacts that are amplified by these intersecting social disadvantages. Understanding this complex web is essential for building genuine resilience, as it moves beyond a one-size-fits-all approach to disaster management and towards targeted, equitable interventions that address the root causes of vulnerability.

Based on the above source, attempt the following five questions.

251. What is the primary concept that explains why different groups within a society experience disaster impacts unequally?
(A) Cascading impacts
(B) Differential vulnerability
(C) Intersectionality
(D) Generic resilience

252. According to the principle of intersectionality, how are vulnerabilities experienced by an individual?
(A) As a unique and compounded form arising from overlapping social categories
(B) As a sequential series of isolated risk factors
(C) Primarily based on a single dominant factor like class or gender
(D) As an equal sum of all individual vulnerability factors

253. The source describes "cascading vulnerabilities" as a phenomenon where:

Click Here to Buy book on Amazon

(B) sensitivity is a legal requirement, whereas inclusivity is optional.
(C) inclusivity focuses on recovery, while sensitivity focuses on preparedness.
(D) inclusivity is about participation, while sensitivity is about design and implementation.

265. The paragraph highlights that children's needs are unique throughout the disaster cycle. Which example illustrates this?
(A) The need for safe spaces for play and education within temporary shelters.
(B) The need for financial compensation for lost property.
(C) The need to be involved in high-risk search and rescue operations.
(D) The need to manage the logistics of the entire community's food supply.

Direction : Please read the following source carefully.

The elderly population represents a distinct and growing demographic with specific vulnerabilities in the context of disasters. Basic concepts of DRR for the elderly must acknowledge that their vulnerability stems from a combination of factors, including potential physical frailty, chronic health conditions, limited mobility, sensory impairments, and social isolation. These factors can severely impede their ability to receive, comprehend, and act on early warnings, as well as their capacity to evacuate without assistance. During the disaster cycle, older people face unique challenges; in the response phase, they may be overlooked in chaotic evacuations, and in post-disaster shelters, they may struggle with inappropriate bedding, lack of access to medications, and specialized dietary needs. Their coping strategies are often shaped by a lifetime of experiences but may be hampered by the loss of social support networks. Therefore, an Elderly-Inclusive Disaster Management approach is crucial, ensuring their voices and needs are incorporated into planning. Concurrently, Elderly-Sensitive DM involves designing and implementing interventions that are specifically tailored to their requirements, such as creating accessible shelters, providing targeted health services, and ensuring communication strategies reach those who may be technologically or socially isolated. Recognizing these best practices is essential for upholding the dignity and safety of older people in disasters.

Based on the above source, attempt the following five questions.

266. What is a primary source of vulnerability for the elderly in disasters, according to the paragraph?
(A) Their unwillingness to accept help from younger generations.
(B) A combination of physical frailty, health conditions, and social isolation.
(C) Their lack of experience in dealing with crisis situations.
(D) An over-reliance on modern technology for information.

267. An "Elderly-Sensitive" disaster management practice would most likely involve:
(A) providing the same standard relief kit to all affected persons.
(B) ensuring temporary shelters have accessible toilets and access to essential medications.
(C) broadcasting evacuation warnings exclusively on social media platforms.
(D) assuming that family members will manage all needs of their elderly relatives.

268. The paragraph suggests that the coping strategies of the elderly are often:
(A) shaped by life experiences but potentially hindered by loss of support networks.
(B) non-existent due to their advanced age.
(C) identical to the coping strategies of younger adults.
(D) ineffective in all disaster scenarios.

NODIA

269. Why is it particularly important for disaster management to be "Elderly-Inclusive"?
(A) Because the elderly constitute the majority of the population.
(B) Because they are the only group that requires assistance during evacuation.
(C) To ensure their specific needs and perspectives are part of the planning process.
(D) To fulfill a purely symbolic gesture of respect.

270. According to the source, which phase of the disaster cycle presents a challenge where elderly individuals might be overlooked?

as observing animal behavior, changes in wind patterns, or the flowering of certain plants, which serve as crucial indicators of impending disasters like floods or cyclones. Coping strategies and disaster response are also deeply embedded in the sociocultural fabric; these include community-based food storage systems, traditional water harvesting techniques, and mutual aid networks that activate during crises. Furthermore, distinctive settlement patterns, livelihood preferences, and sociocultural traditions have often developed as adaptive responses to local hazards. For example, houses built on stilts in flood-prone areas or the choice of drought-resistant crops are manifestations of this knowledge. This system also draws upon literary sources and is instrumental in managing natural resources sustainably to mitigate disaster risks. Recognizing and integrating these global best practices rooted in local context can significantly enhance the effectiveness and cultural appropriateness of contemporary disaster management efforts.

Based on the above source, attempt the following five questions.

281. What is a key characteristic of the Indian Knowledge System in Disaster Management as described in the paragraph?
(A) It is derived from centuries of local experience with environmental hazards.
(B) It relies exclusively on modern technology and satellite data.
(C) It is a new system developed in the 21st century.
(D) It is documented primarily in scientific journals and formal reports.

282. Which of the following is an example of a traditional early warning system mentioned in the source?
(A) Computer-based weather modeling
(B) Observing animal behavior and changes in wind patterns
(C) Satellite imaging of cloud formations
(D) Real-time seismic sensor data

283. How do distinctive settlement patterns, such as building houses on stilts, relate to the Indian Knowledge System?
(A) They are purely aesthetic choices with no practical function.
(B) They represent an adaptive response to local hazards like flooding.
(C) They are modern architectural trends imposed by external agencies.
(D) They are indicative of a community's lack of knowledge about risks.

284. The paragraph suggests that integrating local knowledge into modern DRR can:
(A) enhance the effectiveness and cultural appropriateness of interventions.
(B) hinder the efficiency of scientific disaster management.
(C) make disaster management efforts less effective.
(D) replace the need for any scientific methods entirely.

285. Community-based food storage systems and mutual aid networks are presented in the source as examples of:
(A) modern government-led initiatives.
(B) factors that increase community vulnerability.
(C) traditional coping strategies and disaster response mechanisms.
(D) economically inefficient practices.

Direction : Please read the following source carefully.

The economic aspects of disasters extend far beyond the immediate, visible destruction of property. A comprehensive economic assessment must differentiate between various types of costs and losses. Direct costs refer to the damage inflicted on physical assets, such as buildings, infrastructure, and agricultural crops, which are relatively easier to quantify. In contrast, indirect costs are the consequential losses that disrupt the flow of goods and services, including business interruptions, loss of income, and reduced economic output, which can persist long after the event. Furthermore, disasters result in significant welfare losses and damages, which encompass the non-market impacts on human well-being, such as increased morbidity, mortality, and psychological trauma. Making a precise economic assessment of all disaster losses presents considerable challenges. Quantifying indirect costs is complex as it involves tracking ripple effects throughout the economy. Valuing welfare losses involves difficult

Downloaded from www.pdf.tube

carefully.

The relationship between development and disasters is complex and bidirectional; while disasters can set back development, certain development pathways can create or exacerbate disaster risk. This nexus is central to the pursuit of sustainable development, which aims to meet present needs without compromising the future. The construction of large-scale development projects, such as dams and embankments, can have unintended consequences; while intended to control water, they can alter natural drainage patterns, increase flood risk downstream, or create a false sense of security leading to inappropriate development in hazardous areas. Similarly, rapid and uncontrolled changes in land use, like deforestation for agriculture or urbanization, can degrade ecosystems and reduce their natural capacity to buffer against hazards. A critical manifestation of this is the vulnerability of shanty settlements in urban areas. These informal settlements often occupy high-risk zones like steep slopes or floodplains, lack basic services, and are constructed from non-durable materials, making their inhabitants acutely vulnerable. Therefore, modern urban planning must integrate risk assessment, and initiatives for risk reduction, such as retrofitting critical infrastructure and enforcing building codes, are paramount. The promotion of Disaster Resilient Infrastructure is a key strategy to ensure that new development actively reduces, rather than increases, disaster risk.

Based on the above source, attempt the following five questions.

276. What is the central argument of the paragraph regarding the relationship between development and disasters?
(A) Certain development practices can increase disaster vulnerability.
(B) Development projects invariably reduce disaster risk.
(C) Disasters have no significant impact on a country's development.
(D) Sustainable development is an obstacle to effective disaster management.

277. According to the source, how can a large dam project potentially increase disaster risk?
(A) By generating clean hydroelectric power for a region.
(B) By providing a reliable source of irrigation water for agriculture.
(C) By completely eliminating the possibility of any future flooding.
(D) By creating a false sense of security, encouraging development in hazardous zones.

278. The vulnerability of shanty settlements in urban areas is attributed to a combination of factors, including:
(A) their location in low-risk, prime real estate zones.
(B) their location in hazardous areas and lack of basic services.
(C) robust building materials and access to all basic services.
(D) strong enforcement of urban planning and building codes.

279. The concept of "Disaster Resilient Infrastructure" implies that infrastructure should be:
(A) built as cheaply and quickly as possible after a disaster.
(B) located far away from any human settlements.
(C) designed and constructed to withstand and reduce the impact of hazards.
(D) independent of national development goals.

NODIA

280. Which of the following best exemplifies a change in land use that can increase disaster risk?
(A) Reforesting a degraded hillside to prevent landslides.
(B) Establishing a protected national park.
(C) Implementing zoning laws that prohibit construction on floodplains.
(D) Clearing coastal mangroves for the development of resorts.

Direction : Please read the following source carefully.

Beyond modern scientific approaches, a rich repository of knowledge for disaster risk reduction exists within local communities and traditional practices, often termed the Indian Knowledge System in Disaster Management. This system encompasses a wide array of local knowledge and practices that have evolved over centuries through direct experience with environmental hazards. It includes indigenous early warning systems, such

during the immediate response phase.
(D) only women experience vulnerability during disasters.

259. What is the key difference between 'sex' and 'gender' as defined in the source?
(A) Sex is social, while gender is biological.
(B) Both terms refer to the same biological attributes.
(C) Sex is biological, while gender is a social construct.
(D) Gender is a fixed identity, while sex is fluid.

260. The source mentions that "coping strategies and resilience are also gendered." An example of this would be:
(A) women taking on increased caregiving duties and managing scarce household resources.
(B) men and women equally sharing all post-disaster tasks.
(C) men being exempt from participation in rescue operations.
(D) international aid agencies providing gender-neutral support.

Direction : Please read the following source carefully.

The field of Disaster Risk Reduction (DRR) increasingly recognizes children not merely as passive victims but as a group with specific vulnerabilities and capacities, necessitating a Child-Centered DRR approach. The vulnerability of children in disasters is multifaceted, stemming from their physical, cognitive, and psychosocial development stages. They are more susceptible to disease, malnutrition, and physical injury, and are highly dependent on caregivers who may themselves be affected by the disaster. The trauma of a disaster event can have long-lasting psychological impacts. Throughout the disaster cycle, children's needs are unique; during an evacuation, they require special protection, in shelters, they need safe spaces for play and education, and during recovery, they need support to process their experiences and resume a normal life. Their coping strategies, while resilient in some ways, are different from adults'. A Child-Inclusive Disaster Management (DM) approach involves actively listening to children and incorporating their perspectives into planning processes. Furthermore, a Child-Sensitive approach ensures that all DRR interventions, from early warning systems to relief distribution and school safety programs, are designed with a deep understanding of children's rights, needs, and protection requirements. Adopting such best practices is fundamental to safeguarding the well-being of the younger generation in the face of increasing disaster risks.

Based on the above source, attempt the following five questions.

261. What is the fundamental premise of a Child-Centered DRR approach?
(A) To treat children as miniature adults with similar needs.
(B) To view children solely as passive victims requiring charity.
(C) To prioritize children's needs above all other groups.
(D) To recognize children's specific vulnerabilities and capacities.

262. According to the source, why are children particularly vulnerable in disasters?
(A) Solely due to their lack of economic independence.
(B) Because of their physical, cognitive, and psychosocial development stages.
(C) Because they are inherently less resilient than adults.
(D) Primarily due to their unwillingness to follow instructions.

263. A "Child-Sensitive" approach to DM, as described in the paragraph, would involve which of the following?
(A) Excluding children from all discussions about disaster preparedness to avoid scaring them.
(B) Providing the same relief packages to families with and without children.
(C) Designing early warning alerts that are understandable and accessible to children.
(D) Assuming that parents will be able to meet all of their children's post-disaster needs.

264. The distinction between Child-Inclusive and Child-Sensitive DM implies that:
(A) the two terms are synonymous and can be used interchangeably.

Click Here to Buy book on Amazon

ethical and methodological questions. For local governments, identifying natural disasters with potential financial implications is the first step. This is followed by the crucial tasks of measuring their own financial vulnerability to such events and assessing their financial capacity to respond and recover, which often involves analyzing revenue sources, debt levels, and access to regional or national financial support.

Based on the above source, attempt the following five questions.

286. What is the primary difference between direct and indirect costs of a disaster?
(A) Direct costs are insured, while indirect costs are uninsured.
(B) Direct costs affect the government, while indirect costs affect private citizens.
(C) Direct costs are long-term, while indirect costs are immediate.
(D) Direct costs pertain to physical asset damage, while indirect costs relate to disruptions in economic flow.

287. Which of the following would be classified as an indirect cost of a disaster?
(A) The cost of rebuilding a destroyed bridge.
(B) The value of a factory building that collapsed.
(C) Loss of future income for a shopkeeper whose business was closed for months.
(D) The cost of replacing damaged agricultural machinery.

288. The paragraph identifies "welfare losses and damages" as encompassing:
(A) the total value of all destroyed infrastructure.
(B) the non-market impacts on human well-being, like trauma and health issues.
(C) the decline in the stock market following a disaster.
(D) the cost of relief materials provided by NGOs.

289. According to the source, why is making a precise economic assessment of disaster losses challenging?
(A) Because direct costs are impossible to measure.
(B) Because all costs are typically covered by insurance.
(C) Because economic assessments are not considered important in disaster management.
(D) Because quantifying indirect costs and valuing welfare losses is complex.

290. For a local government, what is a crucial step after identifying potential disaster threats?
(A) To measure its own financial vulnerability and capacity to respond.
(B) To ignore the threat and hope it does not materialize.
(C) To immediately relocate the entire population from the area.
(D) To focus solely on calculating the direct costs of past disasters.

Direction : Please read the following source carefully.

The intricate link between poverty, livelihoods, and disasters forms a vicious cycle that poses a significant challenge to sustainable development. Poverty is a key driver of disaster risk; impoverished populations often have no choice but to live in high-risk areas, such as floodplains or unstable hillsides, and in poorly constructed housing. Their limited financial resources restrict their ability to invest in risk reduction measures, such as strengthening their homes or purchasing insurance. Consequently, they are disproportionately affected when a disaster strikes. Conversely, disasters are a major cause of poverty. A single catastrophic event can destroy a family's entire asset base—their home, livestock, tools, and savings—effectively erasing years of development gains and pushing them into or deeper into poverty. The destruction of livelihoods is a primary mechanism through which this occurs. When a disaster disrupts agriculture, fishing, small businesses, or local labor markets, it eliminates sources of income, undermining a household's ability to recover and rebuild. Therefore, effective Disaster Risk Reduction (DRR) cannot be pursued in isolation; it must be integrated with poverty reduction strategies. Supporting resilient livelihoods and diversifying income sources are critical components of DRR that empower households to better withstand shocks and stresses, thereby breaking the cycle of poverty and disaster.

Based on the above source, attempt the following

Downloaded from www.pdf.tube

five questions.

291. What is the central theme described in the paragraph?
(A) Disasters only affect wealthy communities.
(B) Poverty and disasters are unrelated phenomena.
(C) The existence of a vicious cycle linking poverty, livelihoods, and disasters.
(D) Poverty is solely a consequence of disasters, not a cause of risk.

292. According to the paragraph, how does poverty increase disaster risk?
(A) By forcing people to reside in high-risk areas and poorly constructed housing.
(B) By enabling people to live in the safest, most well-constructed homes.
(C) By providing people with ample financial resources for insurance.
(D) By giving people access to multiple, diverse sources of income.

293. The destruction of livelihoods is identified as a primary mechanism through which:
(A) communities become more resilient.
(B) economic equality is achieved.
(C) early warning systems are improved.
(D) disasters can cause or deepen poverty.

294. Based on the source, an effective DRR strategy should be integrated with:
(A) short-term relief efforts only.
(B) poverty reduction and livelihood support strategies.
(C) military response plans.
(D) architectural design competitions.

295. Which of the following is presented as a crucial strategy to help break the cycle of poverty and disaster?
(A) Concentrating all investments in a single, high-risk industry.
(B) Discouraging small business ownership in vulnerable areas.
(C) Supporting resilient livelihoods and diversifying income sources.
(D) Providing short-term food aid without any long-term planning.

Direction : Please read the following source carefully.

A deeper analysis of vulnerability requires moving beyond a simple checklist of risk factors to embrace the concept of intersectionality. This analytical framework is crucial for understanding how multiple, overlapping social identities—such as caste, class, gender, age, and disability—interact to create unique and compounded layers of disadvantage, particularly in a disaster context. Simply adding up vulnerabilities (e.g., being elderly + being female) is insufficient because intersectionality posits that the combination creates a qualitatively different and often intensified experience of risk. For example, an elderly, disabled woman from a lower-caste, landless household does not just face four separate risks; her identity at the intersection of these categories creates a specific form of marginalization that can render her invisible to generic relief efforts and block her access to resources in ways that a single-axis analysis would miss. This leads to what can be termed 'cascading impacts,' where her initial vulnerability is amplified through the disaster cycle, from receiving warnings to accessing aid and participating in recovery. A focus on intersectionality is therefore vital for building genuine and equitable resilience, as it forces disaster management practitioners to look at the power dynamics and structural inequalities that produce the most acute forms of vulnerability.

Based on the above source, attempt the following five questions.

296. What is the core argument of intersectionality as presented in the paragraph?
(A) Vulnerability is best understood by focusing on a single, primary factor like poverty.
(B) All individuals within a single category, such as 'elderly', face identical risks.
(C) Adding up individual risk factors provides a complete picture of vulnerability.
(D) Overlapping social identities interact to create unique and compounded disadvantages.

297. The paragraph argues that simply adding up vulnerabilities (e.g., elderly + female) is insufficient because:
(A) the combination of factors creates a qualitatively different and intensified experience.

NODIA

(B) it is too complicated to count all the factors.
(C) some vulnerability factors cancel each other out.
(D) gender is always the most important factor to consider.

298. How does an intersectional analysis help improve disaster management?
(A) By creating a single, universal plan for everyone.
(B) By revealing power dynamics and structural inequalities that lead to acute vulnerability.
(C) By simplifying the process and ignoring complex social factors.
(D) By focusing relief efforts only on the largest demographic group.

299. The example of the elderly, disabled, lower-caste woman is used to illustrate:
(A) how resilience is built through individual effort alone.
(B) how a person can be rendered invisible to generic relief efforts due to intersecting marginalizations.
(C) a case that is too rare to be relevant for policy.
(D) that disability is the sole determinant of her vulnerability.

300. The term 'cascading impacts' in this context refers to how:
(A) initial vulnerability is amplified through the disaster cycle due to intersecting identities.
(B) an initial disaster triggers a series of unrelated natural hazards.
(C) all members of a community recover from a disaster at the same rate.
(D) a waterfall can cause a flash flood.

Click Here to Buy book on Amazon

Gender-inclusive disaster management recognizes the diverse needs of all individuals regardless of gender. It involves equal representation in decision-making and the creation of targeted early warning messages. Livelihood recovery programs must be accessible to both men and women to ensure equitable economic restoration. However, it is incorrect to focus only on women; men and boys also face specific vulnerabilities and roles that must be integrated into comprehensive risk reduction planning.

32. (B) Using post-disaster recovery and reconstruction phases to reduce various pre-existing vulnerabilities.
The concept of building back better suggests that the recovery phase is an opportunity to improve community resilience. Rather than simply restoring infrastructure to its original state, this approach integrates risk reduction measures into the reconstruction process. This might involve strengthening building codes, improving land-use planning, or enhancing social support systems. By addressing the root causes of vulnerability during recovery, communities can be better prepared for future hazard events.

33. (B) The ease of calculating the replacement cost of destroyed infrastructure.
Economic assessments face significant challenges, particularly when valuing intangible or long-term impacts. Assigning monetary value to human lives or ecosystem services is conceptually complex and controversial. Furthermore, quantifying indirect costs like business interruption requires detailed data that may not be readily available. Even calculating the replacement cost of infrastructure is rarely easy, as it involves fluctuating material prices, labor costs, and the need to incorporate improved resilience standards.

34. (A) Both A and R are true and R is the correct explanation of A.
Shanty settlements are disproportionately affected by disasters due to their precarious physical and social conditions. These settlements are often built using non-engineered, flimsy materials on hazardous terrain like steep hillsides or floodplains. Additionally, residents frequently lack legal land tenure and basic services, which limits their ability to invest in safety measures or access government support. These combined factors create a high level of vulnerability that is difficult to mitigate without systemic intervention.

35. (C) Local and traditional knowledge systems
Many communities have developed sophisticated methods for predicting local hazards based on long-term observation of the natural environment. Recognizing changes in animal behavior or plant life can provide early warnings for weather-related events. These traditional practices are deeply rooted in local culture and provide a vital supplement to modern technological systems. Valuing and integrating this indigenous knowledge into formal early warning frameworks can improve the accuracy and local acceptance of disaster alerts.

36. (D) Handicap
In disability terminology, a handicap occurs when societal or environmental barriers prevent an individual from participating fully in activities. In the given scenario, the elderly woman's inability to evacuate is not just due to her mobility impairment but is caused by the lack of accessible infrastructure like a ramp. This environmental obstacle creates a disadvantage that threatens her safety during a flood. Addressing such handicaps is central to inclusive disaster risk reduction.

37. (B) Disability results from societal barriers (attitudinal or environmental) preventing full participation.
The social model of disability shifts the focus from an individual's impairment to the barriers created by society. It argues that people are disabled by inaccessible buildings, lack of information in various formats, and discriminatory attitudes rather than by their physical or mental conditions. In disaster management, this model emphasizes the need to remove these obstacles to ensure that everyone can receive warnings, evacuate safely, and access relief services.

38. (B) P, Q, and R only
Child-sensitive disaster management prioritizes the specific physical and psychological needs of children. Setting up child-friendly spaces and providing psychological first aid are essential for helping children cope with trauma. Ensuring

NODIA

8. (A) Both A and R are true and R is the correct explanation of A.
Gender refers to the social constructs that define roles and opportunities for men and women, distinct from biological sex. These societal norms directly impact how different groups experience and recover from disasters. For example, expectations regarding caregiving or domestic duties can limit evacuation speed or access to livelihood opportunities. Therefore, understanding these socially constructed roles is essential for assessing differential vulnerabilities and developing equitable risk reduction strategies.

9. (C) How overlapping social identities like gender and disability compound an individual's total risk.
Vulnerability is rarely the result of a single factor but emerges from the interaction of various social identities. Intersectionality examines how attributes like age, gender, economic status, and disability combine to create unique and intensified risks for specific individuals. By acknowledging these complex layers, disaster managers can better understand why certain people face greater barriers to safety and tailor interventions to reach the most marginalized groups.

10. (A) Impairment
In the context of disability studies, a medical condition affecting body structure or function is classified as an impairment. This term describes the biological or physiological abnormality itself, such as muscular dystrophy, rather than the resulting social or environmental barriers. Identifying impairments is the first step in understanding the specific needs of individuals, although modern frameworks focus more on how these conditions interact with societal obstacles to create disabilities.

11. (A) P-3, Q-4, R-1, S-2
Disability concepts are categorized into distinct levels of impact. An impairment is a structural or functional abnormality, while a disability refers to the resulting limitation in performing activities. A handicap describes the social or environmental disadvantage that prevents an individual from fulfilling their normal roles. Global frameworks like the CRPD provide the legal basis for protecting these individuals' rights, ensuring that societal barriers are addressed in all sectors.

12. (B) Development projects on disaster risk
Large-scale infrastructure projects intended for economic growth can inadvertently create new hazards or exacerbate existing ones. While a dam provides power and water, its potential failure poses a catastrophic threat to downstream populations. This illustrates the critical need to integrate risk assessments into development planning. Ensuring that such projects are designed with disaster resilience in mind is essential for protecting the communities they are meant to serve.

13. (C) Utilizing traditional community granaries to store food for emergencies or lean periods.
Local knowledge systems often contain time-tested strategies for coping with environmental variability. Traditional community granaries represent a decentralized and culturally appropriate method for ensuring food security during crises. These systems rely on community participation and local resources, making them highly resilient and sustainable. Integrating such indigenous practices with modern disaster management frameworks enhances local capacity and promotes self-reliance in the face of recurrent hazard events.

14. (A) P, Q, and S only
Inclusive risk reduction involves the active participation of persons with disabilities in all planning stages. Key components include making early warning systems accessible through multiple formats and ensuring that shelters have features like ramps and adapted sanitation. Consultation is essential for effective evacuation, rather than making assumptions about needs. Furthermore, rehabilitation is a core part of the disaster cycle, aiming to restore independence and promote the rights of individuals.

15. (A) Direct cost
Economic impacts of disasters are classified based on how they occur. Direct costs refer to the immediate physical damage to assets, such as the destruction of buildings, machinery, or infrastructure by a flood. These losses are typically measured by the replacement or repair value of

Downloaded from www.pdf.tube

46. (D) To ensure children's voices are heard and they participate meaningfully in DRR processes appropriate to their age.
Child-inclusive disaster management moves beyond seeing children as passive victims. It seeks to empower them by involving them in risk assessment, planning, and preparedness activities. By listening to children's concerns and ideas, disaster managers can develop more effective strategies that address their specific needs. Meaningful participation also helps children build resilience and confidence, turning them into active agents for safety within their families and the broader community.

47. (A) P, Q, and S only
The Rights of Persons with Disabilities Act (2016) in India mandates that disaster management authorities prioritize the inclusion of PwD. This includes ensuring that information and physical environments are accessible during emergencies. The act explicitly states that PwD must be protected and kept safe during situations of risk and humanitarian crises. It shifts responsibility to the state and authorities to ensure inclusive services, rather than leaving the burden solely on families.

48. (B) An indirect loss
Economic losses are categorized by their nature and timing. Indirect losses refer to the long-term flow-on effects of a disaster, such as the reduction in potential productivity. When an individual sustains a disability, their ability to earn a future income may be significantly impaired. This represents a substantial economic cost to the individual and society that persists long after the initial event. Assessing these losses is crucial for understanding the total economic burden.

49. (C) Indian Knowledge System in Disaster Management
Traditional practices and indigenous wisdom provide valuable insights into local hazard management. This includes weather forecasting methods, architectural designs that resist earthquakes or floods, and sustainable resource management. Studying the Indian Knowledge System allows disaster managers to identify and promote culturally appropriate strategies that have been successful for generations. Integrating these traditional methods with modern technology enhances community resilience and ensures that risk reduction measures are locally relevant.

50. (A) Both A and R are true and R is the correct explanation of A.
Structural interventions like embankments are intended to protect specific areas from flooding, but they can have unintended negative consequences. By confining a river, embankments can increase the velocity of the water, making flooding more severe if they breach or causing higher water levels downstream. This illustrates how development projects can inadvertently shift or increase disaster risk. Careful hydraulic modeling and environmental impact assessments are essential to minimize these adverse effects.

51. (B) encompass non-market impacts like psychological trauma, loss of life, and environmental degradation.
Welfare losses represent the human and social impacts of disasters that are not easily traded in markets. This includes the profound emotional distress caused by trauma, the irreversible loss of human lives, and the destruction of cultural or environmental assets. Unlike direct physical damage, these losses are difficult to quantify in monetary terms but are central to the overall impact on community well-being. Comprehensive assessments must include these factors.

52. (A) The biological and physiological characteristics that define men and women.
Sex is a biological category based on physical attributes such as reproductive organs and hormones. It is universal and generally stable across different cultures. In contrast, gender refers to the socially constructed roles and behaviors that societies consider appropriate for men and women. While sex can influence certain physiological vulnerabilities during disasters, it is the socially defined roles of gender that primarily determine the differential levels of risk and capacity observed.

53. (A) P, Q, R, and S only
Disability inclusive risk reduction requires proactive measures to ensure accessibility and participation. This includes developing materials in Braille, involving PwD in vulnerability

NODIA

located on marginal, high-risk land, making them susceptible to landslides and floods. Dense populations also facilitate the rapid transmission of infectious diseases during crises. Furthermore, the reliance on interconnected systems like power and water means that a single failure can lead to cascading impacts across the city. Urban planning rarely eliminates all risks.

24. (A) The varying levels and types of susceptibility to harm that exist among different groups within a society.
Not all members of a community are affected by a disaster in the same way. Differential vulnerability acknowledges that factors like age, gender, disability, and economic status create varying degrees of risk. Some groups have fewer resources to prepare for or recover from hazards, while others may face physical or social barriers to safety. Identifying these variations is crucial for designing targeted interventions that protect the most at-risk populations.

25. (C) Gender differentials in the disaster cycle and coping strategies.
Men and women often adopt different roles and coping mechanisms in the aftermath of a disaster, influenced by societal expectations. While men may seek wage labor in reconstruction, women frequently take on invisible, unpaid care work that is essential for household survival. This division of labor reflects broader gender inequalities and can limit women's access to economic recovery resources. Policies must recognize these differences to ensure equitable support for all survivors.

26. (B) P-3, Q-4, R-2, S-1
Vulnerable groups face distinct challenges that require tailored disaster management strategies. Children often depend on caregivers and experience education disruptions, while the elderly struggle with chronic health and mobility issues. Persons with disabilities may face barriers in receiving early warnings due to sensory impairments. Women frequently encounter increased safety risks, including gender-based violence, in communal shelter settings. Addressing these specific concerns is essential for an inclusive and effective disaster response.

27. (D) 2016
The Rights of Persons with Disabilities Act was enacted in India in 2016, replacing the earlier legislation from 1995. This landmark act aligns with international standards, specifically the UN CRPD, by adopting a rights-based approach to disability. It includes significant provisions for the protection and safety of persons with disabilities during disaster situations. The act mandates that disaster management authorities must ensure the inclusion and accessibility of all services during emergencies.

28. (B) All of the above.
Children's vulnerability is multifaceted, stemming from physical, physiological, and social factors. Their smaller stature and developing strength make them more susceptible to physical harm, while their immature immune systems increase the risk of disease. Psychologically, they may lack the experience to process traumatic events. Most importantly, their dependence on adults for safety and guidance means that any disruption in caregiving significantly heightens their risk during and after a disaster.

29. (C) Vulnerability to flooding and subsidence
Urban development choices regarding land use can significantly impact a city's hazard profile. Reclaiming wetlands for high-rise construction removes natural drainage systems and reduces the land's ability to absorb water. This often leads to increased flood risk and potential ground subsidence due to the weight of the new structures. Sustainable urban planning must prioritize the preservation of natural buffers and ensure that new infrastructure does not exacerbate environmental vulnerabilities.

30. (D) Welfare loss
Some impacts of disasters are difficult to quantify in monetary terms but are critical to human well-being. Welfare losses include psychological trauma, the loss of cultural heritage, and the erosion of social cohesion. These intangible effects can have profound long-term consequences for individuals and communities. Assessing these losses is essential for a comprehensive understanding of disaster impacts, as they represent the human and social dimensions of a crisis beyond physical damage.

31. (B) P, Q, R, and T only

Click Here to Buy book on Amazon

hazards. Together, these frameworks create a comprehensive approach to risk.

61. (D) Welfare Losses : Increased GDP growth post-disaster.
Welfare losses refer to the non-market, intangible impacts of a disaster that negatively affect human well-being, such as psychological trauma and loss of life. These are inherently negative consequences. In contrast, while reconstruction activities might temporarily boost economic metrics like GDP, this does not represent a welfare gain, as it merely replaces destroyed assets. Direct costs involve physical damage, and indirect costs involve economic disruptions. Accurate classification is essential for assessing true disaster impacts.

62. (B) Recognize and respond to the different needs, capacities, and vulnerabilities of men and women.
A gender-sensitive approach acknowledges that disasters affect men and women differently due to their distinct social roles and biological characteristics. It aims to identify these variations and tailor interventions accordingly, ensuring that both groups receive appropriate support. This includes addressing safety for women in shelters and recognizing men's specific psychological needs. By integrating gender perspectives into all phases of the disaster cycle, managers can ensure a more equitable and effective response for everyone.

63. (C) Uncontrolled urban sprawl into hazardous areas.
Rapid urbanization often outpaces formal planning, leading to the growth of settlements in areas prone to floods, landslides, or seismic activity. This uncontrolled expansion increases the number of people and assets exposed to hazards. Without strict enforcement of zoning laws and building codes, the vulnerability of urban populations continues to rise. Effective risk reduction requires integrating hazard assessments into urban planning and ensuring that development is steered away from high-risk zones.

64. (A) S, R, P, Q
The disaster management cycle follows a logical chronological sequence. It begins with pre-disaster mitigation and preparedness (S) to reduce potential impacts. When a hazard is imminent, evacuation (R) takes place based on warnings. Immediately after the event, search and rescue (P) operations are conducted to save lives. Finally, the long-term process of rehabilitation and recovery (Q) begins to restore livelihoods and infrastructure. This systematic progression ensures a coordinated and comprehensive response.

65. (A) Assessing their ability to generate unforeseen revenue or re-allocate existing funds under stress.
Measuring financial capacity is complex because it involves evaluating a government's potential performance during an actual crisis. It requires understanding not just current budgets but also the legal and political ability to shift funds or raise new revenue quickly. Since disasters are unpredictable in timing and scale, predicting how much financial stress a municipality can withstand is difficult. This assessment is vital for determining the need for disaster insurance or contingency funds.

66. (B) Social capital and resilience
Strong social ties and community trust are essential components of collective resilience. Social capital allows communities to collaborate effectively, share resources, and provide emotional support during a crisis. When people trust their leaders and neighbors, they are more likely to follow safety instructions and work together for the common good. Building and maintaining these social networks is as important for disaster preparedness as physical infrastructure, as it provides the human foundation for recovery.

67. (A) Both A and R are true and R is the correct explanation of A.
Children possess a unique ability to influence their peers and families, making them powerful agents for change. Through school-based programs, they can learn vital safety information and participate in drills, which they then communicate to their households. This active involvement helps build a community-wide culture of safety and preparedness. Recognizing children's capacity to contribute ensures that disaster risk reduction efforts are more comprehensive and foster long-term resilience across generations.

NODIA

education continues by rapidly reopening schools provides a sense of normalcy and stability. However, failing to consider the unique nutritional needs of infants, such as specialized milk or hygiene items, is a critical omission that endangers their health and survival.

39. (B) Financial capacity
A government's ability to manage the economic shocks of a disaster depends on its financial flexibility. This capacity includes having emergency reserves, the ability to reallocate funds from other budgets, and access to credit or external aid. Assessing financial capacity is crucial for disaster planning, as it determines how quickly and effectively a municipality can respond to and recover from unexpected losses. High financial capacity is a key indicator of economic resilience.

40. (A) Building resilience against disasters that affect a primary source of income.
Relying on a single source of income increases vulnerability to hazards that target specific economic sectors. For example, a farmer whose crops are destroyed by drought faces total loss unless they have other skills. Livelihood diversification allows individuals to spread their risk across different activities, ensuring that they have alternative means of survival when their primary income is disrupted. This strategy is a fundamental component of household-level disaster risk reduction.

41. (C) R, Q, P
Disability terminology follows a logical progression from biological traits to societal outcomes. An impairment (R) is the physiological or anatomical loss or abnormality. This can lead to a disability (Q), which is the resulting restriction in performing normal activities. Finally, a handicap (P) is the disadvantage experienced by the individual due to societal or environmental barriers that prevent them from fulfilling their roles. Understanding this sequence helps in identifying where interventions are needed.

42. (A) Ensuring that infrastructure systems can withstand, adapt to, and recover quickly from hazard events.
Disaster resilient infrastructure is designed to maintain essential functions even when subjected to extreme environmental stress. This involves using robust materials, redundant systems, and adaptive designs that allow for quick repair and recovery. The goal is to minimize the cascading failures that often occur when critical systems like power, water, or transportation are damaged. Resilient infrastructure is a cornerstone of sustainable development and effective community-wide risk reduction.

43. (D) Using traditional knowledge to stay hydrated and resting in cooler parts of the house.
Coping strategies are the practical measures individuals take to manage the impacts of a hazard. For the elderly, these often involve utilizing traditional knowledge developed over years of experience. During a heatwave, simple actions like increasing fluid intake and seeking shade are effective ways to reduce physiological stress. These self-managed strategies are vital components of individual resilience and highlight the importance of promoting health-related preparedness among vulnerable age groups.

44. (A) P-3, Q-4, R-1, S-2
Vulnerability is influenced by a variety of social and physical factors. Social hierarchies like caste can determine who receives aid, while class influences the quality of housing and financial reserves. Religious beliefs can shape coping mechanisms and risk perception. Geographic location is a primary determinant of the specific types of hazards encountered. Addressing all these dimensions is necessary for a comprehensive understanding of why certain groups are more susceptible to disaster impacts.

45. (C) Intersectionality
Individuals possess multiple, overlapping social identities that collectively shape their experience of risk. Intersectionality provides a framework for understanding how factors like age, gender, disability, and religion interact to create unique vulnerabilities. A person is not just a member of one group but lives at the junction of several. This perspective is essential for disaster managers to identify the most marginalized individuals and ensure that interventions are truly inclusive and effective.

NODIA

ANSWERS

1. (B) Geographic location
Physical positioning remains a fundamental determinant of susceptibility to natural hazards. Proximity to coastlines, seismic fault lines, or flood-prone river basins directly influences the frequency and intensity of environmental threats a population faces. This spatial dimension dictates the primary hazards encountered, making it a critical factor in assessing overall risk levels and informing the necessary structural and non-structural preparedness measures required for safety.

2. (A) A situation where one form of vulnerability triggers or exacerbates another, creating a chain reaction of risk.
Disasters often initiate a sequence of events where a single failure precipitates additional crises. This compounding effect occurs when social, economic, or physical weaknesses interact, leading to a ripple effect across different sectors. For instance, a power grid failure can disrupt water supplies and healthcare services, creating a complex emergency. Understanding these interdependencies is vital for developing comprehensive risk management strategies that address systemic failures.

3. (A) P, Q, and S only
Vulnerability is shaped by social hierarchies, demographic factors, and physical location. Social structures like caste determine resource access, while age influences physical and cognitive capacity to respond to hazards. Geographic location dictates the specific types of environmental threats faced by a community. However, economic status is highly relevant, as wealth directly affects the quality of housing and the ability to recover from financial losses.

4. (D) Ensuring women's participation in post-disaster community decision-making committees.
Effective risk reduction requires the active involvement of all social groups to ensure their unique needs and perspectives are addressed. Including women in decision-making processes allows for the design of more effective recovery programs and policies. This inclusive approach helps identify specific gendered risks, such as safety concerns in shelters or access to health services, which might otherwise be overlooked by male-dominated planning groups.

5. (C) Gender-inclusive shelter management
Managing displacement centers necessitates specific attention to the safety and dignity of women and girls. Providing well-lit, private, and secure sanitation facilities is a critical measure to prevent gender-based violence and ensure hygiene. This practice acknowledges that women face unique risks in crowded environments and requires intentional planning to provide a secure environment. Such measures are fundamental components of inclusive humanitarian assistance during the response phase.

6. (B) Recognizing children as passive victims without coping capacities.
Modern child-centered risk reduction emphasizes that children possess unique resilience and the potential to be active contributors to safety. Rather than viewing them solely as helpless victims, this approach recognizes their ability to learn safety protocols and share information within their families and communities. Empowering children through education and participation helps build a culture of safety and ensures their specific developmental needs are met.

7. (D) The elderly population is always resilient and requires less specialized attention than other groups.
Older individuals often face heightened risks during disasters due to physical mobility limitations, chronic health conditions, and social isolation. Sensory impairments can hinder their ability to receive and act upon early warnings. Consequently, they require specialized attention and inclusive planning rather than being dismissed as universally resilient. Effective disaster management must account for these specific vulnerabilities to ensure that the elderly are protected and supported.

Downloaded from www.pdf.tube

assessments, and designing wheelchair-accessible evacuation routes. Rescue teams must also be trained in specialized assistance techniques. Assuming that families will handle everything is a barrier to inclusion and violates the rights of PwD to professional and equitable support. Professional planning is necessary to ensure safety for all.

54. (D) Creating a centralized database of elderly individuals with their specific needs and locations.
Effective management of risks for the elderly requires precise information about where they live and what assistance they need. A centralized database allows responders to target their efforts during evacuations and ensure that life-saving medications or mobility aids are provided. This proactive approach acknowledges that many elderly individuals may live alone or have limited mobility. It is a fundamental step toward ensuring that no vulnerable person is overlooked during a crisis.

55. (C) By increasing impervious surfaces, which can lead to higher flood peaks and waterlogging.
Land-use changes, particularly industrialization and urbanization, significantly alter the local hydrology. Converting agricultural land or forests into paved areas replaces permeable soil with impervious surfaces like concrete and asphalt. This prevents rainwater from soaking into the ground, leading to rapid runoff and higher flood peaks. Such changes increase the risk of waterlogging and flash floods in both the immediate area and downstream, necessitating improved drainage and water management.

56. (B) A fatalistic belief that disasters are divine punishment and cannot be mitigated.
Cultural beliefs can either support or hinder risk reduction efforts. While traditional water harvesting and community grain banks are positive coping strategies, fatalism acts as a barrier. If people believe that disasters are inevitable or divinely ordained, they may be less likely to take preventive actions or participate in preparedness programs. Overcoming such beliefs through education and awareness is a key challenge in promoting a proactive culture of safety within communities.

57. (D) Financial vulnerability
A municipality's susceptibility to the economic shocks of a disaster is a measure of its financial vulnerability. When a local government lacks the reserves or revenue-generating capacity to cover essential costs like debris removal and repair, it remains dependent on external aid. This financial precariousness can delay recovery and exacerbate the long-term impacts on the community. Assessing these economic weaknesses is vital for developing robust risk financing and contingency planning at the local level.

58. (A) Coping strategies and resilience
Children face significant emotional and psychological stress during and after disasters. Providing safe play areas and psychosocial support helps them process traumatic experiences and regain a sense of normalcy. These interventions are critical for building their internal coping mechanisms and fostering long-term resilience. By addressing the emotional well-being of children, disaster managers can mitigate the psychological impacts of a crisis and support healthy developmental outcomes even in challenging circumstances.

59. (C) The capacity of individuals and communities to cope with, adapt to, and recover from a disaster.
Resilience is a dynamic attribute that encompasses the ability to manage the impacts of a hazard and bounce back stronger. It involves utilizing available skills, social networks, and resources to navigate a crisis. For vulnerable populations, building resilience means strengthening their internal capacities and social support systems so they can better withstand shocks. This goes beyond physical infrastructure to include the psychological and social strengths that allow communities to thrive despite adversity.

60. (B) P-3, Q-1, R-2, S-4
Disaster management is guided by a combination of international treaties, domestic laws, and traditional knowledge. The CRPD provides global standards for the safety of persons with disabilities, while India's RPD Act 2016 translates these rights into national legislation. The SDGs offer a broad framework for reducing inequality and building resilience. Complementing these are Indian Knowledge Systems, which provide local, time-tested practices for managing

NODIA

the damaged property. Calculating these costs is the initial step in assessing the total economic burden of a disaster on a community or industry.

16. (B) Poverty is a key driver of vulnerability, as it limits people's capacity to cope with and recover from disasters.
Economic deprivation forces individuals to live in high-risk areas and reduces their access to resources for preparedness and recovery. Limited financial reserves make it difficult for poor households to rebuild their lives after losing assets or livelihoods. Consequently, reducing poverty is a fundamental component of disaster risk reduction. Effective strategies must address the root causes of economic vulnerability to build long-term community resilience against hazards.

17. (B) Q, R, S, P
Vulnerability levels vary across different demographic groups based on their access to resources and physical capacities. Isolated elderly persons with disabilities typically face the highest risk due to mobility and health challenges. Children from low-income families follow, as they depend on adults and lack financial security. Middle-class women have better access to resources but may still face gendered barriers. Able-bodied adult males with secure incomes are generally the least vulnerable.

18. (A) Ensuring the protection and safety of persons with disabilities during risks and humanitarian emergencies.
Article 11 of the Convention on the Rights of Persons with Disabilities mandates that states must take all necessary measures to protect individuals during crises. This global treaty shifts the focus from a medical or charity model to a rights-based approach, emphasizing inclusion and accessibility. It requires disaster management authorities to incorporate the needs of persons with disabilities into all phases of the disaster cycle to ensure equitable safety.

19. (C) Economic Model
Disability is understood through various lenses, including the medical, social, and charity models. The medical model focuses on individual impairments as problems to be fixed, while the social model emphasizes societal barriers as the cause of disability. The charity model views individuals as objects of pity. The economic model is not a standard conceptual framework used to define the nature of disability, although economic factors certainly influence the lives of individuals.

20. (A) Both A and R are true and R is the correct explanation of A.
Disasters often disrupt traditional support systems, placing a disproportionate burden on women for caregiving and household management. In the aftermath, women frequently assume additional responsibilities for children, the elderly, and the injured, which can limit their ability to seek paid employment or rebuild their own livelihoods. These socially constructed roles create differential impacts that must be addressed through targeted recovery programs that support women's economic and social reintegration.

21. (C) A traditional coping strategy based on local knowledge.
Indigenous communities often develop architectural and settlement patterns that are specifically adapted to local environmental hazards. Building houses on stilts in flood-prone areas is a prime example of using traditional knowledge to mitigate risk. This practice allows residents to remain in their ancestral lands while minimizing the impact of seasonal floods on their homes and belongings. Recognizing and supporting such local strategies is essential for culturally appropriate disaster management.

22. (B) An indirect cost of the disaster.
While direct costs involve physical damage, indirect costs refer to the resulting disruptions in economic activity. Business interruption, loss of income for workers, and decreased production levels are classic examples of indirect impacts following a disaster. These costs can often exceed the value of the physical damage and can have long-lasting effects on the regional economy. Accurate economic assessments must account for these flow-on effects to understand the true impact.

23. (C) P, Q, and S only
Urban environments face unique challenges due to high population density and interdependent infrastructure. Shanty settlements are frequently

Click Here to Buy book on Amazon

68. (C) Gender and disasters.
Disasters often exacerbate existing social inequalities, leading to increased safety risks for vulnerable groups. In the chaotic environment of relief camps, the lack of privacy and security can lead to a rise in domestic violence and sexual exploitation. Addressing these issues is a core part of gender-sensitive disaster management. It requires intentional planning, such as providing well-lit facilities and establishing grievance mechanisms, to ensure that women and girls are protected in post-disaster settings.

69. (D) Ensuring communication of warnings through multiple channels, including low-tech ones like door-to-door visits.
Older adults may face barriers in receiving digital or high-tech early warnings due to sensory impairments or a lack of technological literacy. Using a variety of communication methods, including traditional ones like community sirens or personal visits, ensures that they are not left behind. This inclusive approach acknowledges their specific needs and social patterns. Effective warning systems must be redundant and accessible to ensure that the most vulnerable populations receive life-saving information in time.

70. (C) P, Q, and R only
Persons with disabilities are experts on their own lives and the barriers they encounter in their environment. Including them in disaster planning leads to more effective and inclusive outcomes, as they can identify specific accessibility needs that others might overlook. Their coping strategies and resilience are often significant but frequently ignored by traditional disaster managers. Recognizing PwD as active contributors rather than just passive aid recipients is essential for professional and equitable risk reduction.

71. (C) Cascading impacts
Modern societies depend on complex, interconnected infrastructure systems where the failure of one component can trigger a chain reaction across other sectors. For instance, a power outage caused by a storm can disable water pumps, telecommunications, and hospital equipment. These cascading impacts multiply the initial damage and create complex management challenges. Understanding these interdependencies is crucial for building resilient systems that can withstand shocks and prevent widespread societal disruption during a disaster event.

72. (A) Literary sources within its traditional knowledge system.
Historical records, ancient epics, and regional folklore often contain detailed accounts of past environmental disasters and how previous generations responded. These literary sources are valuable components of a country's traditional knowledge system, offering insights into long-term hazard patterns and time-tested coping strategies. By studying these records, disaster managers can identify culturally appropriate and effective methods for risk reduction. This indigenous wisdom complements modern scientific data and enhances the local relevance of disaster planning.

NODIA

73. (D) a resulting activity limitation.
While an impairment is a physiological or structural abnormality in the body, a disability refers to the practical limitation it places on an individual's ability to perform activities. This distinction is crucial for understanding how health conditions affect people's lives. In disaster management, the focus is on addressing these limitations by providing assistive devices or modifying environments to ensure that individuals can evacuate and receive aid despite their impairments. This perspective promotes functional inclusion.

74. (B) Promote livelihood options that are less susceptible to local hazards.
Building resilience involves ensuring that communities can maintain their economic well-being even after a hazard event. This is achieved by promoting livelihood activities that are less likely to be destroyed by local threats, such as drought-resistant crops or flood-resilient aquaculture. Diversifying income sources also helps reduce the impact of any single disaster. By linking economic development with risk reduction, governments can help households protect their assets and recover more quickly from environmental shocks.

75. (C) P-3, Q-2, R-1, S-4

Gender-specific issues manifest throughout all phases of the disaster cycle. In the preparedness phase, women often lack representation in planning. During response, safety in shelters is a major concern. The recovery phase may see unequal access to compensation for rebuilding. In mitigation, structural measures like flood walls can inadvertently hinder women's access to essential resources like water. Addressing these distinct challenges is necessary for ensuring that disaster management efforts are equitable and do not reinforce existing inequalities.

76. (C) Initiative for risk reduction in India
Implementing seismic-resistant building designs and land-use zoning are proactive measures aimed at reducing potential losses from future earthquakes. These initiatives reflect a shift toward a culture of prevention and preparedness within urban planning in India. By prohibiting construction on known fault lines, authorities can prevent the creation of new risks. Such non-structural and structural mitigation efforts are essential components of a professional disaster management strategy that prioritizes long-term community safety and resilience.

77. (D) It treats all children as a homogenous group with identical needs.
Child-centered risk reduction acknowledges that children's needs vary significantly depending on their age and stage of development. Infants, school-aged children, and adolescents face different physical and psychological risks and have varying capacities. Effective strategies must be tailored to these differences, addressing specific concerns like nutritional needs for infants and educational continuity for older children. Treating all children as a single group overlooks these nuances and can lead to ineffective and inappropriate disaster management practices.

78. (A) P, Q, and R only
Disaster risk and development are deeply interconnected. Unsustainable practices, such as deforestation or building in high-risk zones, create new hazards. Conversely, a single disaster can destroy years of developmental progress in a community. Therefore, it is essential to integrate risk reduction measures into all development planning to ensure long-term sustainability. While development can reduce risk if done correctly, it does not happen automatically. Infrastructure projects must always consider their impact on disaster vulnerability to be effective.

79. (B) Differential vulnerability based on caste
Social hierarchies like the caste system can profoundly influence an individual's susceptibility to disaster impacts. Discrimination can lead to the exclusion of certain groups from community resources like shelters or relief supplies, significantly increasing their risk. This differential vulnerability is rooted in long-standing social structures rather than biological or geographic factors alone. Effective disaster management must actively address these social inequities to ensure that aid is provided impartially and that the rights of all citizens are protected.

80. (C) The unpredictability of the timing and magnitude of natural disasters.
A primary challenge in fiscal planning for disasters is that hazards occur without much warning and their impact can vary wildly. This unpredictability makes it difficult for local governments to set aside the appropriate amount of emergency funds or to plan for the exact scale of resources needed. This uncertainty can lead to budget shortfalls and slow recovery times. Robust financial management requires flexible budgeting and the use of diverse risk financing tools to manage these unknowns.

81. (B) Ensuring warnings are disseminated in multiple, accessible formats (e.g., text, audio, visual, sign language).
For an early warning system to be truly inclusive, it must reach individuals with various types of impairments. Using multiple formats, such as sirens for the sighted and text alerts for the hearing-impaired, ensures that everyone receives critical information. Visual aids and sign language are also essential for accessibility. This redundancy prevents information gaps and ensures that all members of the community have the necessary time to evacuate and seek safety during an emergency.

82. (A) The destruction of home-based income-generating activities and loss of small livestock.
In many societies, women's livelihoods are closely tied to the domestic sphere, involving

Downloaded from www.pdf.tube

activities like cottage industries or small-scale animal husbandry. These assets are often the first to be lost in disasters like floods or cyclones. Since these activities are often informal, women may face significant barriers in accessing credit or government aid to restart them. Addressing these specific livelihood losses is essential for supporting women's economic recovery and maintaining household-level resilience after a crisis.

83. (A) Both A and R are true and R is the correct explanation of A.
Poverty is a fundamental driver of disaster risk, as it limits people's choices and forces them into unsafe living conditions. Poor individuals often lack the financial reserves to invest in hazard-resistant housing or to recover quickly from losses. Therefore, integrating poverty reduction with disaster management is essential for building sustainable resilience. By improving economic status and providing social safety nets, governments can reduce the underlying vulnerabilities that make people susceptible to environmental shocks.

84. (C) Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Sustainable development provides a framework for growth that balances economic, social, and environmental goals. By preserving natural resources and ensuring social equity, it reduces the creation of new disaster risks. This long-term approach ensures that communities can prosper without making themselves more vulnerable to hazards. Integrating risk reduction into sustainable development planning is critical for protecting the well-being of both current and future generations from the increasing threats of environmental change.

85. (A) Retrofitting a hospital to withstand earthquakes.
Structural measures involve physical changes to the built environment to enhance its resilience to hazards. Retrofitting critical infrastructure, such as hospitals, ensures they remain functional during and after a disaster, which is vital for saving lives. These engineering solutions are a key part of risk reduction, providing tangible protection against physical damage. Complementing structural measures with non-structural ones like awareness campaigns and evacuation plans creates a comprehensive and effective strategy for community safety.

NODIA

86. (D) Participatory Vulnerability and Capacity Assessment (VCA).
VCA is a community-based process where local residents identify their own risks and resources. By mapping their environment, communities can develop localized disaster plans that are grounded in their specific needs and capacities. This participatory approach empowers people and ensures that risk reduction measures are culturally appropriate and locally relevant. It encourages collective action and builds social capital, making it a highly effective tool for enhancing community-level resilience and promoting a culture of safety.

87. (B) A national budget allocation for sports and recreation.
Disability-inclusive frameworks for disasters focus on the specific legal, social, and physical requirements for ensuring safety. This includes international treaties like the CRPD, which mandate the protection of PwD during risks. Domestically, laws like India's RPD Act 2016 provide the necessary legal mandates for inclusion. General budget allocations for non-related sectors like sports do not contribute to these specialized frameworks. Inclusive DRR requires targeted policies and dedicated resources to address the unique barriers faced by individuals.

88. (B) Q, R, P
International and national frameworks for disability and disaster risk have evolved over the last two decades. The UN CRPD was established in 2006, providing a global rights-based foundation. This was followed by the Sendai Framework for Disaster Risk Reduction in 2015, which emphasized an all-of-society approach. India subsequently enacted the Rights of Persons with Disabilities Act in 2016, translating these international principles into domestic law. This sequence reflects the growing global and national commitment to inclusive safety.

89. (D) Identifying regional financial vulnerabilities.

When critical infrastructure like hospitals and fire stations are located in high-risk zones, the entire region faces a significant economic and social threat. A single hazard event could disable essential services, leading to massive financial losses and a hindered emergency response. Identifying these spatial vulnerabilities allows governments to prioritize retrofitting or relocation projects. This assessment is a vital step in managing the potential financial impact of disasters and ensuring that the regional economy and public safety are protected.

90. (A) Livelihood recovery and DRR.
Livelihoods are the foundation of household resilience, and their restoration is a priority after a disaster. Providing grants to replace lost tools, like boats and nets, allows individuals to resume their economic activities quickly. This not only supports family survival but also reduces their dependence on aid and prevents them from falling deeper into poverty. Protecting and restoring livelihoods is a core strategy for ensuring that communities can recover effectively and remain resilient to future hazard events.

91. (C) P-4, Q-2, R-3, S-1
Specific disaster management practices must be tailored to the unique needs of different vulnerable groups. The elderly benefit from medication management and health outreach. Children require safe play spaces and psychosocial support to process trauma. Women's safety is improved by inclusive camp committees and secure facilities. Persons with disabilities need physically accessible environments and assistive devices. Implementing these best practices ensures that the specific challenges faced by each group are addressed, promoting equitable safety and recovery.

92. (B) 'Sensitive' means being aware of issues, while 'inclusive' means actively involving the concerned groups in the process.
These terms represent different levels of engagement in disaster management. A disaster-sensitive approach acknowledges the unique needs and vulnerabilities of various groups, such as children or women. A disaster-inclusive approach goes further by actively involving these groups in the planning, decision-making, and implementation processes. True inclusion ensures that policies are not just made for people but with them, leading to more effective and locally relevant risk reduction measures that reflect the actual experiences of the community.

93. (C) Drawing pictures or storytelling to process their experiences.
Children often use creative expression as a way to process the trauma and confusion following a disaster. Activities like drawing and storytelling provide a safe outlet for their emotions and help them make sense of their experiences. These self-managed coping strategies are essential for their psychological recovery and building resilience. Supporting these activities within child-friendly spaces is a key part of sensitive disaster management, acknowledging that children have their own unique ways of navigating and recovering from crises.

94. (C) P, Q, and R only
Development projects can inadvertently increase community vulnerability in various ways. Dams often displace residents, weakening their social networks and economic stability. Embankments can create a false sense of security, which may discourage individuals from maintaining their own preparedness levels. Furthermore, environmental changes like deforestation for agriculture can destabilize land and increase the risk of landslides. While development is intended to improve lives, it can create new hazards if risk reduction is not integrated into the planning process.

95. (A) Enable governments to plan for budget contingencies and risk financing.
Identifying the financial implications of natural hazards allows authorities to develop proactive economic strategies. This includes establishing emergency reserve funds, purchasing disaster insurance, or creating plans for rapid budget reallocation. By understanding the potential scale of losses, governments can ensure they have the necessary resources to respond and recover without causing long-term fiscal instability. This professional approach to risk financing is a cornerstone of economic resilience, protecting both public services and the broader regional economy from shocks.

Click Here to Buy book on Amazon

96. (B) Distributing hygiene kits that include sanitary items for women and girls.
Gender-sensitive disaster management recognizes that women and girls have specific physiological needs that must be addressed during emergencies. Providing hygiene kits with sanitary products is a basic but essential practice for maintaining health and dignity in communal settings. This approach moves beyond generic aid to provide targeted support that acknowledges these distinct requirements. Such practices ensure that the response is more equitable and effective, directly addressing the practical challenges faced by women and girls in the aftermath of a crisis.

97. (B) The Convention on the Rights of Persons with Disabilities (CRPD).
The CRPD defines disability as an evolving concept that results from the interaction between individuals with impairments and the barriers in their environment. This social model emphasizes that it is the lack of accessible infrastructure and discriminatory attitudes that create the "disability," rather than the physical or mental condition itself. This perspective shifts the focus toward removing these societal obstacles and ensuring universal rights. In disaster management, this requires making all information and services accessible to everyone, regardless of their impairments.

98. (A) Both A and R are true and R is the correct explanation of A.
The Indian Knowledge System incorporates centuries of observation and adaptation to local hazards. For example, traditional 'koti banal' architecture in the Himalayas uses local materials and specific structural techniques to resist seismic activity. These practices are deeply contextual and highly effective, offering sustainable alternatives to modern construction methods. Recognizing and documenting such indigenous wisdom allows disaster managers to promote time-tested strategies that are culturally appropriate and enhance community resilience through locally available resources and traditional skills.

99. (C) Physical vulnerability
Susceptibility to harm due to the built environment and physical location is classified as physical vulnerability. Living in substandard housing on hazardous terrain, such as an unstable hillside, directly exposes individuals to risks like landslides or building collapse. This dimension of risk is often exacerbated by rapid urbanization and the lack of enforced building codes. Addressing physical vulnerability requires structural interventions, such as retrofitting buildings or implementing land-use zoning, to ensure that the physical environment is safe for its inhabitants.

100. (D) quantifying the value of lost ecosystem services.
Natural disasters often cause significant damage to the environment, resulting in the loss of services like water filtration, flood control, and carbon sequestration. However, since these services are not traded in markets, it is difficult to assign them a precise monetary value. This challenge in valuation means that the total economic impact of a disaster is often underestimated. Accurate assessments must develop innovative methods to account for these intangible ecological losses to provide a complete picture of disaster consequences.

101. (D) Chronological
Vulnerability is traditionally analyzed through social, economic, physical, and environmental dimensions. Social vulnerability relates to community structures and hierarchies, while economic vulnerability involves financial resources and livelihoods. Physical vulnerability concerns the built environment and geographic location. These dimensions interact to determine a population's overall risk level. While disasters occur over time, "chronological" is not a standard category used to describe the underlying characteristics and circumstances that make a community susceptible to the damaging effects of a hazard.

102. (A) The need for medications for chronic illnesses and mobility support.
Older adults are more likely to suffer from long-term health conditions that require continuous treatment. In the chaos of a disaster, access to essential medications and health services can be disrupted, posing a life-threatening risk. Furthermore, mobility support is often necessary for safe evacuation. Elderly-sensitive planning must specifically address these health and

Downloaded from www.pdf.tube

in cities, necessitating integrated planning and resilient infrastructure to protect both residents and the urban economy from potential disasters.

130. (A) environmental stewardship and social equity.
Sustainable development aims to balance economic growth with environmental protection and social justice. This approach is essential for reducing disaster risk because it promotes development that does not deplete natural buffers or increase social inequalities. By maintaining healthy ecosystems and ensuring that all members of society have access to resources, communities become more resilient to environmental shocks. Integrating risk reduction with sustainable development ensures that growth is robust and protects both the environment and the well-being of present and future generations.

131. (D) Social disability
Disability is typically categorized into physical, sensory, intellectual, and mental illness types. These classifications are based on the nature of the underlying impairment. While social factors and environmental barriers are critical in defining the experience of "disability" under the social model, "social disability" is not a recognized clinical or legal category. Understanding the different types of impairments is important for providing specific support services and assistive devices, although modern frameworks emphasize the need for universal accessibility and inclusion for all individuals.

132. (B) Retrofitting
Retrofitting is the process of strengthening existing structures to make them more resistant to hazard impacts. This structural mitigation strategy is particularly important for critical buildings like hospitals, schools, and emergency centers in seismic or flood zones. By upgrading the physical components of a building, authorities can prevent collapse and ensure that essential services remain functional during a crisis. Retrofitting is a cost-effective way to enhance the safety of the built environment and is a key part of professional disaster risk reduction planning.

133. (D) The loss of tourism revenue for a region in the months following a hurricane.
Indirect costs of a disaster refer to the flow-on economic impacts that occur as a result of the initial physical damage. The decline in tourism revenue is a classic example of an indirect cost, as it stems from the disruption of the region's image and services rather than the destruction of a specific building. These losses can be substantial and can persist for a long time, affecting the regional economy more than the direct physical costs. Accurate economic assessments must capture these broader impacts.

134. (A) Q, S, R, P
Inclusive search and rescue follows a logical sequence to ensure the safety of persons with disabilities. It begins with identifying PwD and their specific needs in the community (Q). When a hazard is imminent, warnings must be disseminated in multiple accessible formats (S). Rescue teams must be trained in specialized assistance techniques to avoid causing injury (R). Finally, accessible transportation must be provided to ensure a safe and effective evacuation (P). This systematic approach ensures that no one is left behind during a crisis.

NODIA

135. (C) a combination of factors, like being elderly, female, and from a minority group, creates unique and heightened vulnerabilities.
Vulnerability is often the result of multiple, overlapping social identities that interact to create specific and intensified risks. Intersectionality provides a framework for understanding these complex layers of vulnerability beyond a single attribute like gender or age. For example, an elderly woman with a disability from a marginalized group faces unique barriers that a younger man with the same disability might not. By acknowledging these intersections, disaster managers can identify the most at-risk individuals and tailor interventions to reach them.

136. (A) acknowledge that men and women may experience and express trauma differently.
Psychological impacts of disasters are influenced by gender roles and social expectations. Men and women may have different ways of experiencing and expressing trauma, and their needs for support can vary. A gender-sensitive approach ensures that psychosocial services are tailored to these differences, providing appropriate and effective care for everyone. This includes recognizing the specific stressors faced by each group and ensuring that support is accessible

109. (A) To understand and respond to the unique vulnerabilities and needs of children at different stages of their development.
Child-sensitive disaster management prioritizes the specific physical, psychological, and social needs of children. It acknowledges that a child's susceptibility and capacity change as they grow, necessitating tailored interventions. This approach involves protecting children from immediate harm and supporting their long-term development through education and psychosocial care. By addressing these unique requirements at each stage of development, disaster managers can ensure that the rights and well-being of children are prioritized throughout the disaster cycle, promoting healthy recovery and resilience.

110. (A) Q, R, P
Frameworks for disability and disaster range from global treaties to local planning guidelines. The UN CRPD provides the highest level of international mandate for the rights and safety of persons with disabilities. This is followed by national laws like India's RPD Act 2016, which translate international principles into domestic requirements. Finally, specific national and local disaster management plans provide the practical guidelines for implementing these legal mandates. This tiered approach ensures that global commitments are effectively integrated into local emergency responses.

111. (C) the social or environmental disadvantage experienced by the individual.
A handicap is not a characteristic of an individual but a result of their interaction with an unsupportive environment. It refers to the disadvantage that prevents a person with a disability from fulfilling their normal roles in society. For example, a wheelchair user is handicapped by stairs, not by their inability to walk. In disaster management, the goal is to eliminate these handicaps by ensuring that all physical and informational environments are fully accessible to everyone during emergencies.

112. (B) Catastrophic flooding if the embankment breaches
Poorly planned embankments can create a false sense of security while inadvertently increasing hazard risk. By confining a river, they can raise water levels and increase the velocity of the flow. If these structures breach during a flood, the release of high-velocity water can cause much more severe damage than gradual flooding would have. This illustrates the need for comprehensive environmental impact assessments and professional engineering in all structural development projects to ensure they do not create new disaster risks.

113. (A) Both A and R are true and R is the correct explanation of A.
Economic assessments of disasters are notoriously complex because they must account for more than just physical damage. While the cost of a destroyed building can be estimated, assigning a monetary value to human lives, cultural artifacts, or the long-term effects of psychological trauma is conceptually and ethically difficult. These intangible losses are a significant part of a disaster's total impact. Therefore, precise assessments are challenging, requiring innovative approaches to capture the full spectrum of social and human consequences.

114. (D) In the same flooded village, a wealthy family evacuates in their car while a poor family is trapped on their roof.
Differential vulnerability highlights how the same hazard event can have vastly different impacts on people within the same community. Access to resources, such as transportation and financial reserves, determines an individual's capacity to evacuate and recover. While the physical event is identical, the level of risk and suffering is shaped by social and economic status. Identifying these variations is crucial for disaster managers to ensure that assistance is targeted to those who lack the means to protect themselves.

115. (A) Ensure data collected after a disaster is disaggregated by sex and age.
To understand the different impacts of a disaster on men, women, and children, it is essential to collect and analyze data specifically by sex and age. This disaggregation allows disaster managers to identify unique needs, such as health requirements for women or educational needs for children. Without this data, interventions may be gender-blind and fail to address the specific vulnerabilities of certain groups. Accurate data collection is a fundamental step toward more equitable and effective risk reduction.

Click Here to Buy book on Amazon

physical requirements. By ensuring that chronic-care needs are prioritized, disaster managers can prevent the exacerbation of existing illnesses and ensure the safety and well-being of older individuals.

103. (A) P, Q, and R only
Children face unique physical and psychological challenges during disasters. Their education is often interrupted, leading to long-term developmental setbacks. Their immature immune systems make them more susceptible to waterborne diseases in the aftermath of a crisis. Furthermore, the trauma of witnessing a disaster can have profound and lasting psychological effects. While children do possess resilience, they are not homogenous and have distinct nutritional and health needs compared to adults. Addressing these specific vulnerabilities is essential for child-sensitive disaster management.

104. (B) The concentration of economic assets and critical infrastructure.
Cities are hubs of high-value investments, dense populations, and essential services like power grids and transportation networks. This concentration means that a single hazard event can cause massive and complex damage, leading to high financial losses and widespread societal disruption. The interdependency of urban systems also creates the potential for cascading failures. Managing urban risk requires integrated planning that prioritizes the resilience of critical infrastructure and addresses the high density of assets exposed to potential environmental threats.

105. (C) The Indian knowledge system for early warning
Local communities often possess a wealth of knowledge about their environment, including subtle signs that precede hazard events. Documenting indicators like the behavior of insects or cloud formations is part of capturing this indigenous early warning system. These traditional methods are deeply contextual and provide valuable localized information that can supplement modern technological forecasting. Integrating this traditional wisdom with scientific data improves the accuracy and cultural relevance of early warnings, enhancing community preparedness and local trust in safety alerts.

106. (B) P-4, Q-3, R-2, S-1
Disaster management concepts cover a wide range of social and physical issues. Intersectionality examines how multiple social identities combine to increase risk. Cascading impacts occur when one failure leads to another across different sectors. Disaster resilient infrastructure involves building systems that can withstand and recover from shocks. Linking livelihoods and risk reduction ensures that communities have the resources to survive and bounce back. Together, these concepts provide a comprehensive framework for understanding and managing complex disaster risks.

107. (A) Poverty alleviation is a form of long-term disaster risk reduction.
Economic deprivation is a root cause of vulnerability, as it limits individuals' ability to prepare for, withstand, and recover from disasters. By improving people's economic status, governments enhance their capacity to live in safer housing and maintain financial reserves. Therefore, poverty reduction strategies and disaster management goals are deeply interconnected and mutually supportive. Sustainable risk reduction requires addressing these underlying economic inequalities to build long-term community resilience and reduce the disproportionate impact of hazards on the poor.

108. (C) Women may lose assets and tools related to home-based enterprises, with little access to credit to restart them.
Women's livelihoods are frequently informal and domestic, making them particularly vulnerable to physical damage from disasters. When tools or livestock are lost, women often face significant barriers in the formal financial system, which may lack gender-sensitive policies. This exclusion prevents them from accessing the credit needed to rebuild their businesses. Post-disaster recovery programs must recognize these specific challenges and provide targeted support to ensure women can restore their income-generating activities and maintain their economic independence.

NODIA

the community can effectively receive warnings, evacuate, and access aid.

123. (A) Direct cost
Direct costs refer to the immediate and measurable physical destruction of assets during a disaster. The loss of standing crops due to a hazard like drought or flood is a primary example of a direct economic loss. These costs are typically valued based on the market price of the destroyed resources. Calculating these losses is the first step in assessing the immediate economic impact on sectors like agriculture, which is fundamental for planning relief and recovery programs for affected communities.

124. (D) The interaction of different vulnerabilities that creates a more complex and severe risk profile.
Cascading vulnerabilities occur when multiple weaknesses in a community interact and amplify each other. For example, poverty can lead to poor nutrition, which in turn increases susceptibility to infectious diseases after a flood. This interaction creates a complex and compounded risk that is more difficult to manage than any single factor alone. Identifying these interdependencies is essential for developing systemic risk reduction strategies that address the root causes of vulnerability and prevent the escalation of crises.

125. (A) Recognizing children as agents of change who can promote a culture of safety.
Child-centered risk reduction emphasizes the active and positive role that children can play in their communities. By participating in safety education and drills, children can share important information with their families and peers, helping to build a broader culture of preparedness. This approach empowers children and acknowledges their capacity to contribute to disaster management. Promoting children as agents of change ensures that risk reduction efforts are more comprehensive and foster long-term community resilience across all age groups.

126. (A) P, Q, R, and S only
Modern frameworks for disability and disasters, such as the UN CRPD and India's RPD Act 2016, emphasize the rights and inclusion of persons with disabilities. These frameworks mandate that disaster management authorities must provide specific inclusion measures, make warnings accessible, and ensure safety during humanitarian emergencies. The active involvement of disabled persons' organizations is also a key principle. These modern approaches reject the idea that disability is a private matter, instead viewing it as a public responsibility and human rights issue.

127. (D) A component of the Indian Knowledge System for managing natural resources.
Traditional water management techniques like 'ghuls' are part of the indigenous knowledge systems that have been used in India for centuries. These systems are specifically adapted to local geography and climate, providing sustainable and resilient methods for managing resources. In arid regions, they are essential for irrigation and household water needs. Recognizing and integrating these traditional practices into modern disaster management is important for maintaining local resilience and ensuring that water resources are managed in a culturally appropriate and effective manner.

128. (D) Protecting and strengthening livelihoods is a critical component of DRR for the poor.
For impoverished communities, livelihoods are the primary means of survival and the foundation of resilience. Disasters can destroy assets and income sources, pushing people deeper into poverty and increasing their vulnerability to future events. Therefore, disaster risk reduction must include programs that protect and diversify livelihoods, ensuring that individuals can maintain their economic well-being even after a crisis. Strengthening the economic capacity of the poor is a fundamental strategy for building long-term community resilience against environmental and financial shocks.

129. (A) Both A and R are true and R is the correct explanation of A.
Urban areas are characterized by high population density and a concentration of high-value infrastructure and economic assets. This density means that even a localized hazard event can cause widespread damage and societal disruption. Furthermore, the interdependency of urban systems, such as power and water, means that one failure can quickly lead to others. These factors contribute to a high level of complex risk

Downloaded from www.pdf.tube

116. (C) P, Q, and R only
Shanty settlements are a common feature of rapid urbanization where formal housing cannot keep up with demand. Residents of these informal settlements often face extreme vulnerability because they lack legal land rights and live in high-risk zones like floodplains. Their homes are typically constructed with flimsy, non-engineered materials that offer little protection against hazards. These combined factors of poor location, weak structure, and lack of tenure make shanty residents some of the most at-risk populations in any city.

117. (B) Relying on a pre-established personal support network for assistance.
Proactive preparedness is essential for persons with disabilities during emergencies. Relying on a pre-established network of friends, family, or neighbors who are aware of their specific needs and how to assist is a key coping strategy. This personal buddy system ensures that the individual can receive help with evacuation and access to warnings quickly. Such strategies demonstrate personal resilience and the importance of social capital in enhancing the safety and independence of individuals during a disaster event.

118. (A) an individual deficit or problem that needs to be fixed or cured.
The medical model of disability focuses on the impairment as a clinical problem within the individual. It views the person as "broken" and emphasizes medical treatment and rehabilitation as the primary solutions. In disaster management, this model might lead to a focus only on medical needs while ignoring the societal and environmental barriers that prevent full participation. While medical care is important, relying solely on this model overlooks the rights and inclusion of individuals as active members of society.

119. (C) Measure the direct and indirect financial costs of disasters.
The economic aspect of disasters focuses on identifying and quantifying the total financial burden of hazard events. This includes direct costs like physical damage to assets and indirect costs like business interruption and lost production. Understanding these impacts is essential for effective risk management, as it allows governments to plan for budget contingencies and risk financing. Comprehensive assessments also consider the long-term effects on regional economic growth, providing a data-driven basis for prioritizing risk reduction investments.

NODIA

120. (A) Religion
Vulnerability is influenced by a range of social and cultural factors that shape how people perceive and respond to risk. Religion is a significant dimension because it can influence belief systems, social networks, and community support structures. For instance, religious groups often have strong internal networks that can be utilized for aid and support. Conversely, certain beliefs can affect risk perception or lead to fatalism. Addressing all social dimensions, including religion, is necessary for a comprehensive understanding of community vulnerability.

121. (B) often have unique health, mobility, and social vulnerabilities that need specific attention.
Older individuals face a combination of physical and social challenges that heighten their risk during disasters. Physical mobility limitations can make evacuation difficult, while chronic health conditions may worsen under stress. Social isolation can also prevent them from receiving warnings or receiving help from neighbors. Inclusive disaster management must prioritize these specific needs, ensuring that health outreach, accessible communications, and mobility support are provided. Acknowledging these vulnerabilities is essential for ensuring the safety and dignity of older populations during crises.

122. (A) P-3, Q-4, R-1, S-2
Different vulnerable groups require targeted disaster management practices to ensure their safety and inclusion. Gender-sensitive DM involves including women in shelter design to address their privacy and safety needs. Child-sensitive DM uses age-appropriate communication like picture-based warnings. Disability-inclusive DM focuses on physical accessibility features like ramps. Elderly-inclusive DM utilizes social strategies like buddy systems for those living alone. Implementing these specific measures ensures that all members of

and culturally appropriate. Addressing these emotional needs is a vital part of supporting long-term recovery and community resilience.

137. (B) Children's coping strategies and resilience should be recognized and supported.
Modern child-centered risk reduction moves beyond seeing children solely as passive victims. It emphasizes that children possess their own coping mechanisms and can be active contributors to community safety. By recognizing and supporting their resilience, disaster managers can help children process trauma and become more confident in their ability to manage risks. This approach involves empowering children through education and participation, ensuring that their voices are heard and that their specific needs and capacities are integrated into all phases of disaster management.

138. (B) P, Q, and S only
Legal and conceptual frameworks for disability emphasize rights and inclusion. India's RPD Act 2016 and the UN CRPD provide the legal mandates for protecting PwD and ensuring their inclusion in disaster management. Concepts like handicap describe the disadvantages caused by societal and environmental barriers. However, the social model of disability does not focus on "fixing" the individual's impairment; instead, it emphasizes removing the external barriers that cause disability. Understanding these distinctions is fundamental for a professional and rights-based approach to inclusive disaster management.

139. (C) Concentrating populations in high-risk zones with inadequate infrastructure and services.
Shanty settlements frequently grow in hazardous urban areas, such as floodplains or unstable slopes, because residents have few other options. These informal areas typically lack basic infrastructure like drainage and formal building standards, which significantly increases the risk for those living there. High population density further exacerbates the situation, making evacuation and aid delivery difficult. The vulnerability of these settlements represents a major challenge for urban disaster management, requiring targeted interventions to improve safety and provide essential services to marginalized residents.

140. (C) Ancient epics, puranas, and regional folklore.
Literary and cultural sources in India contain a wealth of historical information about natural hazards and traditional coping mechanisms. Ancient epics and regional folklore often document past environmental disasters and the strategies used by communities to survive. These records provide valuable insights into long-term hazard patterns and culturally appropriate methods for risk management. Studying these sources allows disaster managers to integrate time-tested indigenous wisdom with modern scientific knowledge, enhancing the effectiveness and local relevance of contemporary disaster risk reduction strategies and preparedness planning.

141. (A) Financial capacity
Financial capacity refers to a government's ability to absorb the economic shocks of a disaster using its own resources. This includes having emergency reserves, the ability to reallocate funds, and a strong revenue base. Assessing this capacity is vital for disaster planning, as it determines how quickly and effectively a municipality can respond to and recover from unexpected losses. High financial capacity is a key indicator of economic resilience, protecting both public services and the broader regional economy from long-term damage after a crisis.

142. (C) Gender-inclusive livelihood recovery
Providing women with non-traditional skills like masonry after a disaster empowers them economically and ensures they can participate actively in the reconstruction process. This practice challenges traditional gender roles and provides women with sustainable income-generating opportunities. It also helps address labor shortages in the construction sector. By integrating gender inclusion into livelihood programs, disaster managers can promote more equitable and resilient recovery outcomes, ensuring that women have equal access to the resources and skills needed to rebuild their lives and communities.

143. (B) P-4, Q-1, R-2, S-3
Disaster management is built on several key concepts. Resilience is the ability of a system to recover from a shock, while vulnerability refers to the characteristics that make a community susceptible to harm. Coping capacity is the ability of people to manage adverse conditions

Click Here to Buy book on Amazon

aid delivery, and strengthening social ties. Professional disaster management must account for these social dimensions to ensure that risk reduction measures are inclusive and protect all members of society regardless of their status.

194. (A) men and women are impacted differently and have different capacities at each stage of a disaster.
Gender differentials are persistent throughout the entire disaster management cycle, influenced by societal roles and biological factors. In the preparedness phase, women may lack access to info, while in the recovery phase, men and women may have different needs for livelihood support. Capacities also vary, with both groups bringing unique strengths to community resilience. Recognizing these differences at each stage—mitigation, preparedness, response, and recovery—is essential for ensuring that disaster management is equitable and that interventions are appropriately tailored to the specific needs and capacities of all community members.

195. (A) P, Q, and S only
Child-sensitive disaster practices focus on protecting children from physical and emotional harm while supporting their long-term development. This includes identifying and safeguarding unaccompanied minors, providing psychosocial support through play and art, and ensuring that education continues through temporary learning spaces. These measures are essential for helping children process trauma and maintain a sense of normalcy. In contrast, ignoring their nutritional needs or excluding their voices are negative practices that fail to respect children's rights and unique vulnerabilities. Professional risk reduction must prioritize these sensitive interventions to support healthy recovery for the younger generation.

196. (B) the obligation of states to ensure the protection and safety of PwD in situations of risk.
Article 11 of the CRPD is a landmark international provision that explicitly requires states to take all necessary measures to ensure the safety of persons with disabilities during crises, including natural disasters. This legally binding treaty shifts the focus toward a rights-based approach, emphasizing that accessibility and protection are mandatory requirements rather than discretionary aid. It requires disaster management authorities to incorporate disability concerns into all emergency plans. This global framework provides the essential foundation for inclusive risk reduction, promoting the dignity and safety of all individuals in the face of humanitarian emergencies.

NODIA

197. (D) Preserving sacred groves, which also act as biodiversity reserves and help in soil and water conservation.
Indigenous knowledge systems often involve the sustainable management of natural resources, which can significantly reduce disaster risk. The practice of preserving sacred groves is a prime example, as these protected areas maintain biodiversity, prevent soil erosion, and support water conservation. These natural buffers help mitigate hazards like landslides and droughts. Recognizing and supporting such traditional resource management practices is important for culturally appropriate and effective risk reduction. By valuing this indigenous wisdom, disaster managers can promote sustainable land-use practices that enhance community resilience and protect the environment for both current and future generations.

198. (C) the increased psychological stress and trauma in an affected population.
Welfare losses represent the profound human and social impacts of disasters that are not easily traded in financial markets. Increased psychological stress, trauma, and the loss of well-being among survivors are primary examples. These intangible consequences can have long-lasting effects on individuals and communities, hindering their recovery and overall resilience. Assessing these losses is essential for a comprehensive understanding of the total impact of a crisis, as it focuses on the human dimension beyond physical damage. Professional disaster management must include psychosocial support and social programs to address these critical welfare-related impacts of environmental and technological hazards.

199. (A) make livelihoods more resilient to hazards.
Strengthening the economic foundation of communities is a key part of long-term risk reduction. By promoting hazard-resilient livelihood options, such as drought-resistant

150. (A) P, Q, and R only
An inclusive and effective disaster management plan must prioritize the specific needs of vulnerable groups. This includes maintaining a list of individuals who require special assistance, ensuring shelters are physically accessible, and using a variety of communication methods to reach everyone. These proactive measures ensure that the most at-risk populations are protected. Plans that rely on generic supplies or only focus on infrastructure recovery often overlook the human and social dimensions of disaster, failing to provide equitable safety for all community members.

151. (A) Because children constitute a significant and uniquely vulnerable portion of the population.
Children make up a large segment of society and face specific physical, psychological, and social risks during disasters. Their smaller stature, developing immune systems, and emotional maturity make them more susceptible to harm. Furthermore, their dependence on adults for safety and well-being means they are particularly at risk if family structures are disrupted. Professional disaster management must prioritize children's needs, ensuring they are protected and that their specific requirements for health, education, and safety are integrated into all emergency planning and response activities.

152. (A) Resilience in PwD is often demonstrated through their well-developed problem-solving skills and personal coping mechanisms.
Persons with disabilities are not just passive recipients of aid; they possess significant internal resilience. This is often seen in their ability to navigate complex environments and develop innovative problem-solving strategies to manage their daily lives. These personal coping mechanisms can be highly effective during disasters. Recognizing and supporting the resilience of PwD is a key part of inclusive risk reduction. It moves beyond a focus on vulnerability to acknowledge the strengths and capacities that individuals bring to disaster preparedness and response.

153. (B) promoting the integration of disaster risk management into urban development planning.
As cities grow rapidly, it is essential to integrate risk reduction into all aspects of urban development. This includes ensuring that land-use zoning avoids high-risk areas and that all new infrastructure is built to hazard-resistant standards. By embedding disaster management into the planning process, authorities can prevent the creation of new risks and protect the expanding urban population. This integrated approach is a cornerstone of professional risk reduction, ensuring that development is both resilient and sustainable in the face of future environmental shocks.

154. (B) a form of traditional knowledge for climate adaptation.
Many communities have developed architectural and settlement patterns that are specifically designed to manage local climate conditions and hazards. Clustered housing in desert regions creates natural shade and reduces heat exposure, representing a time-tested strategy for climate adaptation. These traditional practices are deeply rooted in local culture and geography, providing sustainable and effective solutions for living in challenging environments. Recognizing and valuing this indigenous wisdom is important for promoting culturally appropriate and resilient disaster management and environmental planning at the local level.

155. (A) difficulty in assigning a monetary figure to non-market goods like a clean environment or a human life.
A primary challenge in economic assessments is the "problem of valuation," which refers to the difficulty of putting a price on intangible or non-market assets. Human lives, cultural heritage, and ecological services are essential for well-being but are not easily traded in financial markets. This makes it difficult to fully quantify the total cost of a disaster. Accurate assessments must use innovative methods to capture these intangible losses, ensuring that the human and environmental consequences are fully recognized and addressed.

NODIA

156. (A) poverty reduction and disaster risk reduction are mutually supportive goals.
Economic deprivation is a fundamental driver of vulnerability, while disasters can push people further into poverty. Therefore, efforts to reduce poverty and efforts to mitigate disaster risk are deeply interconnected. By improving livelihoods

environment to accommodate the needs of all individuals.

169. (A) P, Q, R, and S only
Positive disaster risk reduction involves a combination of structural and non-structural measures. Structural solutions like earthquake-resistant buildings and restoring natural buffers like mangroves provide tangible physical protection. Non-structural measures like early warning systems and community drills enhance community preparedness and response capacity. Together, these strategies create a comprehensive approach to risk management. Ignoring local knowledge, however, is a negative practice that can lead to ineffective and culturally inappropriate measures, highlighting the need for integrating traditional wisdom with modern technology in all disaster planning.

170. (C) The monetary value of a destroyed highway.
Direct costs represent the immediate physical damage to assets caused by a hazard event. The monetary value of a destroyed highway is a primary example of a direct economic loss. These costs are typically calculated based on the cost of repairing or replacing the damaged infrastructure. Identifying and quantifying these direct losses is a fundamental step in assessing the immediate economic burden of a disaster. This data is essential for planning reconstruction efforts and for determining the total financial impact on a region's physical capital.

171. (C) Welfare loss
Welfare losses are the intangible impacts of a disaster that negatively affect human and social well-being. The loss of social cohesion and cultural practices in a displaced community are prime examples, as they represent a decline in the quality of life that cannot be easily measured in monetary terms. These losses are deeply felt by individuals but are often overlooked in traditional economic assessments. Professional disaster management must account for these human and social consequences to provide a complete picture of disaster impacts and recovery needs.

172. (A) disasters cause poverty, and poverty increases vulnerability to future disasters.
The relationship between poverty and disasters is often a self-reinforcing cycle. Disasters destroy the assets and income sources of the poor, pushing them further into economic deprivation. This increased poverty then makes them more vulnerable to future hazards because they have fewer resources for safe housing and recovery. Breaking this vicious cycle requires integrated strategies that combine disaster risk reduction with poverty alleviation. By improving livelihoods and providing social protection, governments can help people build resilience and escape the trap of recurrent disaster-induced poverty.

173. (A) A chain reaction where one failure triggers another, such as a flood causing a power outage, which then disrupts water supply.
Cascading impacts occur when a single hazard event initiates a sequence of failures across interconnected systems. Modern infrastructure is highly interdependent, meaning that a disruption in one sector, like power or communications, can lead to breakdowns in others, such as water supply, healthcare, and transportation. These compound failures multiply the initial damage and create complex challenges for disaster response and recovery. Understanding these interdependencies is crucial for building resilient systems that can withstand shocks and prevent widespread societal disruption during an environmental or technological crisis.

174. (A) Increased risk of separation from family and trafficking.
Children face specific social risks during and after disasters, particularly the danger of being separated from their primary caregivers. In the chaos of an emergency, unaccompanied minors are highly vulnerable to abuse, exploitation, and human trafficking. Addressing these protection risks is a core part of child-sensitive disaster management. It requires establishing systems for identifying and protecting unaccompanied children and ensuring that family reunification is a priority. These measures are essential for safeguarding children's rights and well-being in the highly volatile aftermath of a hazard event.

175. (A) legally mandates the inclusion of disability concerns in disaster management activities.
India's Rights of Persons with Disabilities Act (2016) provides the necessary legal framework for ensuring that the needs of PwD are integrated into all phases of disaster management. It

Downloaded from www.pdf.tube

the first responders and the primary stakeholders in their own safety.

163. (B) regional financial vulnerability.
When a region's economy depends heavily on a single hazard-prone industry, it faces a high degree of financial risk. A disaster that affects that primary sector can lead to widespread economic loss, business closures, and high unemployment. This concentration of risk makes the entire regional economy vulnerable to shocks. Assessing these economic interdependencies is essential for effective disaster risk management. Diversifying the regional economy and developing risk financing tools are key strategies for reducing this vulnerability and building long-term financial resilience for the entire community.

164. (B) ensure that people can meet their basic needs and recover more quickly after a disaster.
Protecting livelihoods is central to household-level resilience. By ensuring that individuals can maintain their income and assets despite hazard events, disaster risk reduction programs help communities meet their immediate needs and restore their lives more quickly. This includes promoting hazard-resilient livelihood options and providing support for restoring lost assets. By strengthening the economic foundation of households, governments can reduce the long-term impact of disasters and prevent people from falling into poverty, fostering more resilient and self-reliant communities across various hazard-prone regions.

165. (A) can change over time due to factors like income, health, or policy changes.
Vulnerability is a dynamic condition that is shaped by evolving social, economic, and physical circumstances. A person's level of risk can fluctuate based on changes in their financial status, physical health, or the social policies in their community. For example, improved housing or access to healthcare can reduce vulnerability, while economic loss can increase it. Recognizing this variability is crucial for disaster managers to identify the most at-risk individuals and tailor interventions to their current needs, ensuring that risk reduction efforts remain effective and relevant over time.

166. (A) It acknowledges that gender roles and social structures create different types of risks and disadvantages for men and women in disasters.
Gendered vulnerability highlights how societal norms and expectations influence the level of risk faced by men and women. For example, women may face barriers in evacuation due to domestic responsibilities or lack of access to resources, while men may experience different psychological stressors. Understanding these socially constructed differences is essential for developing equitable disaster management strategies. By addressing these gender-specific vulnerabilities, disaster managers can ensure that both men and women receive appropriate support and that risk reduction efforts do not reinforce existing social inequalities or disadvantages.

NODIA

167. (A) Both A and R are true and R is the correct explanation of A.
Children's unique developmental stages make them especially susceptible to harm during and after disasters. Their smaller stature and developing immune systems increase their physical risk, while their lack of experience and psychological maturity make them more vulnerable to trauma. Furthermore, their dependence on adults for safety and well-being means they are profoundly affected by disruptions in family care. Addressing these specific vulnerabilities is a professional necessity in disaster management, ensuring that children's rights and well-being are prioritized throughout the entire disaster cycle to prevent long-term negative consequences.

168. (C) removing societal barriers to ensure full participation and inclusion.
The social model of disability shifts the responsibility for "disability" from the individual to society. It argues that people are disabled by environmental obstacles, lack of information in accessible formats, and discriminatory attitudes rather than by their physical or mental impairments. In disaster management, this model emphasizes the importance of removing these barriers to ensure that everyone can receive warnings, evacuate safely, and access aid. This rights-based approach promotes full inclusion and equitable safety, focusing on modifying the

assistive devices like wheelchairs, hearing aids, or prosthetics. These tools allow individuals to resume their daily activities and participate fully in the recovery of their communities. Inclusive rehabilitation also includes psychosocial support and physical therapy, ensuring a holistic approach to recovery. By addressing these specific needs, disaster managers can support the rights and well-being of PwD, promoting more equitable and resilient post-disaster outcomes.

182. (A) increases the vulnerability of the coastal area to storms and tsunamis.
Natural ecosystems like mangrove forests act as critical buffers against coastal hazards, including storm surges and tsunamis. By clearing these forests for developmental projects like ports, authorities significantly reduce the coastline's natural protection. This development choice increases the vulnerability of both the infrastructure and the nearby communities to future environmental shocks. Sustainable development requires integrating risk assessments into planning to ensure that natural buffers are preserved, protecting long-term social and economic investments from the increasing threats of environmental hazards and climate change in various vulnerable coastal regions.

183. (B) P, Q, and S only
Indian Knowledge Systems offer significant potential for disaster risk reduction through traditional hazard-resistant architecture and local medicinal wisdom. These practices are deeply contextual and use locally available resources. However, these systems are often dismissed as unscientific by modern disaster managers, which limits their integration into formal planning. Recognizing both the value and the challenges of IKS is important for promoting culturally appropriate and sustainable risk reduction strategies. Documenting and validating these traditional methods allows for more inclusive and effective disaster management that respects local traditions and enhances community-level resilience through time-tested wisdom.

184. (D) the capabilities, assets, and activities required for a means of living.
Livelihood encompasses all the resources and actions that individuals and households use to meet their basic needs and achieve their goals. This includes physical assets, human skills, social networks, and financial resources. In the context of disaster risk reduction, the focus is on making these livelihoods resilient to hazards, ensuring that people can maintain their economic well-being despite shocks. Protecting and diversifying livelihoods is a fundamental strategy for building long-term community resilience, as it reduces vulnerability and allows for faster and more effective recovery after a natural or human-induced hazard event.

185. (C) A is true but R is false.
Intersectionality is a vital concept because it acknowledges that an individual's identity is multidimensional and that different social factors interact to shape their unique risk profile. A person is not just "disabled" or "female" but may live at the intersection of several identities, each of which contributes to their level of vulnerability. Assessing risk based on a single factor like gender or class provides an incomplete and potentially ineffective understanding of vulnerability. Therefore, while the assertion is true, the reason is false, as it fails to recognize the complex nature of human identity and risk.

186. (A) Gender-sensitive disaster management.
Gender-sensitive disaster management recognizes that women and girls have specific health and safety needs that must be addressed during and after disasters. Providing specialized support for pregnant and lactating women ensures maternal and infant health in challenging environments. Similarly, addressing the specific requirements of adolescent girls promotes their dignity and well-being. These targeted interventions move beyond generic aid to provide more equitable and effective support that acknowledges the distinct biological and social experiences of different female age groups, ensuring that the most vulnerable receive appropriate and timely assistance.

187. (B) Child-inclusive and Child-sensitive DM
Ensuring education continues after a disaster is a best practice that prioritizes children's long-term development and emotional well-being. Rapidly re-establishing schools and creating learning centers provides children with a sense of stability and normalcy, which is essential for their recovery from trauma. These centers also offer a safe environment for psychosocial support.

Click Here to Buy book on Amazon

mandates that authorities take specific measures to protect and include persons with disabilities during emergencies. This rights-based legislation shifts the focus from discretionary aid to a legal obligation, ensuring that accessibility and participation are fundamental requirements for all disaster-related activities. This act is essential for promoting professional and equitable risk reduction for all citizens, regardless of their physical or mental impairments.

176. (B) P-4, Q-3, R-2, S-1
Urban risk management involves addressing both physical and social vulnerabilities. Informal shanty settlements on hazardous slopes are a prime example of high physical vulnerability. Urban planning failures, such as the lack of building code enforcement, contribute significantly to these risks. The concentration of high-value assets in a single hazard zone increases the potential for massive economic losses. Disaster resilient infrastructure, such as retrofitted hospitals, is a key strategy for mitigating these impacts. Together, these issues highlight the complex nature of managing risk in rapidly growing and interdependent urban environments.

177. (B) Observing the unusual behavior of ants or termites to predict heavy rain.
Traditional knowledge systems in India include time-tested methods for predicting local weather hazards. For generations, communities have observed signs in the natural world, such as the unusual behavior of insects or changes in plant life, as early warnings for events like heavy rain or floods. These indigenous forecasting methods are deeply contextual and provide valuable localized information. Integrating this traditional wisdom with modern technological systems enhances community preparedness and trust in safety alerts, providing a culturally appropriate and locally relevant supplement to formal early warning frameworks for various hazard events.

178. (B) Direct costs relate to the physical damage of assets, while indirect costs relate to the flow-on effects on the economy.
Direct costs are the immediate monetary losses from physical destruction, such as damaged buildings and infrastructure. In contrast, indirect costs refer to the resulting disruptions in economic activity, such as business interruption, lost income, and decreased productivity. While direct costs are often the most visible, indirect impacts can have much larger and longer-lasting effects on a region's economy. Accurate economic assessments must capture both types of losses to provide a complete understanding of the total financial impact of a disaster and to plan for sustainable recovery.

179. (B) Acknowledge that women's and men's coping strategies might differ and support both.
A gender-sensitive approach recognizes that men and women may have different roles, responsibilities, and ways of managing disaster impacts. For example, women's coping strategies often focus on household survival and social networking, while men's may involve different psychological or economic responses. Effective disaster management identifies these variations and provides support that is appropriate for both groups. By acknowledging these distinct strategies, disaster managers can ensure that interventions are equitable and build on the unique strengths and capacities that all members of the community bring to the recovery process.

180. (B) potential sensory impairments (hearing, vision) or social isolation that prevents them from receiving the warning.
Older individuals face unique challenges in receiving early warnings during emergencies. Physical factors like hearing or vision impairments can make it difficult to perceive traditional sirens or text-based alerts. Furthermore, social isolation can prevent them from receiving personal notifications from neighbors or community members. Inclusive warning systems must address these barriers by using multiple communication channels, including low-tech and personal methods like door-to-door visits. This proactive approach ensure that life-saving information reaches the most vulnerable elderly populations in time for them to take safe and effective action.

181. (A) Providing assistive devices like wheelchairs or prosthetics as needed.
Rehabilitation for persons with disabilities after a disaster is essential for restoring their independence and mobility. A key component of this process is the provision of necessary

NODIA

using their skills and resources. A hazard is a dangerous phenomenon that can cause loss or injury. Understanding these definitions and how they interact is fundamental for developing professional strategies that reduce risk and build community capacity to handle disasters.

144. (B) their potential social isolation and dependence on others for assistance.
Social isolation is a significant factor that increases the vulnerability of older people during disasters. Those living alone may not receive early warnings in time and may lack the personal support network needed for evacuation. Dependence on others for mobility or medical care also places them at greater risk if their caregivers are unavailable. Inclusive disaster management must proactively identify and support isolated elderly individuals, ensuring they are integrated into community safety plans and receive the necessary assistance to stay safe during an emergency.

145. (B) providing pathways, entrances, and sanitation facilities that are usable by people with mobility impairments.
For a shelter to be truly inclusive, it must be physically accessible to everyone, including those with mobility impairments. This means providing ramps, wide doorways, and adapted sanitation facilities. Without these features, persons with disabilities may face significant barriers in accessing aid and maintaining their dignity. Designing for accessibility from the start ensures that everyone can stay safe and comfortable during displacement. This is a fundamental component of professional and equitable shelter management, reflecting a commitment to the rights of all individuals.

146. (A) Both A and R are true and R is the correct explanation of A.
Large-scale development projects like mining and deforestation can significantly alter the natural landscape, often leading to increased disaster risk. By destabilizing slopes and reducing the land's natural ability to absorb water, these activities can exacerbate hazards like landslides and floods. This illustrates the critical need to integrate risk assessments and environmental impact studies into all development planning. Ensuring that projects are sustainable and resilient is essential for protecting communities and ensuring that economic growth does not create new environmental vulnerabilities.

147. (B) the challenge of enforcing land-use regulations and building codes in the face of rapid, often informal, growth.
Rapid and often unplanned urbanization in India makes it difficult for authorities to enforce safety standards and zoning laws. Informal settlements frequently emerge in high-risk zones, and buildings may be constructed without proper hazard resistance. This failure to implement and enforce regulations increases the vulnerability of urban populations to disasters. Effective risk reduction in urban areas requires strengthening governance, improving land-use planning, and ensuring that all construction complies with safety codes to protect residents and infrastructure from future hazard impacts.

148. (C) Personal preference
Differential vulnerability is rooted in structural and social factors rather than individual choices or preferences. Attributes like age, gender, disability, and class create varying levels of risk because they determine access to resources, physical capacity, and social support. These systemic factors are what disaster managers must identify and address to protect the most susceptible populations. Personal preferences do not fundamentally shape the underlying circumstances that make certain groups more vulnerable to the damaging effects of a natural or human-induced hazard event.

149. (A) In all phases: preparedness, response, recovery, and mitigation.
Gender roles and social expectations influence how people experience and respond to hazards throughout the entire disaster management cycle. In preparedness, women may lack access to information; in response, they may face safety risks in shelters. The recovery phase often sees unequal access to reconstruction resources, and mitigation projects can inadvertently hinder certain groups. Recognizing these differentials in all phases is essential for ensuring that disaster management is equitable and effective, addressing the specific needs and capacities of both men and women.

Downloaded from www.pdf.tube

By focusing on educational continuity, disaster managers can mitigate the long-term social and economic consequences of a crisis for the younger generation, promoting healthy developmental outcomes and building resilience among children in all hazard-affected communities.

188. (A) Q, R, P
Disability terminology follows a logical sequence from a physical attribute to its social consequences. It begins with an impairment, such as a visual impairment (Q). This leads to a disability or activity limitation, like being unable to read standard print (R). Finally, a handicap occurs when societal barriers, such as employer discrimination or inaccessible information, prevent the person from participating fully in activities like employment (P). Understanding this progression is essential for identifying where interventions should be targeted to remove environmental and attitudinal obstacles and ensure full inclusion and equitable safety for everyone.

189. (D) Robustness and Redundancy
Disaster resilient infrastructure is characterized by its ability to maintain functionality under stress and recover quickly from damage. Robustness refers to the physical strength of the system to withstand hazard impacts. Redundancy involves having extra capacity or alternative systems that can take over if a primary component fails. These features help prevent the cascading failures that often occur when critical services are disrupted. Building infrastructure with these principles ensures that essential systems like power and water are more reliable, protecting community well-being and the regional economy from the catastrophic impacts of natural disasters.

190. (B) a pre-disaster focus on risk reduction, mitigation, and preparedness.
A key global lesson in disaster management is that preventing or reducing risks is more effective than only responding to disasters after they occur. This shift involves investing in structural and non-structural measures, such as hazard-resistant infrastructure and early warning systems, before a hazard strikes. By focusing on risk reduction and preparedness, governments can save lives and reduce the massive economic costs associated with disaster recovery. This proactive approach is a cornerstone of professional disaster management, ensuring that communities are more resilient and better prepared to handle future environmental shocks and stresses.

191. (D) balancing the immediate costs of DRR measures against other pressing public service needs.
Local governments often face difficult financial choices when allocating their limited budgets. Investing in disaster risk reduction, which provides long-term but often invisible benefits, can be challenging when there are immediate and visible needs for other public services like education and healthcare. This trade-off is a significant challenge for professional risk management. Effective strategies require demonstrating the long-term cost-effectiveness of DRR and integrating risk reduction into all sectors to ensure that resources are used efficiently to build overall community resilience and safety across all hazard-prone regions.

NODIA

192. (A) Poverty leads to choices that increase risk, such as living in unsafe housing, because no other options are available.
Economic deprivation profoundly influences disaster vulnerability by limiting the choices available to individuals. Poor households often live in substandard housing on hazardous land, like floodplains or unstable slopes, simply because they cannot afford safer alternatives. They also lack the financial reserves to invest in hazard-resistant materials or to recover quickly from losses. Recognizing this link is essential for effective risk reduction. Strategies must address the root causes of poverty to improve living conditions and provide social safety nets that enhance the capacity of the poor to withstand and manage environmental shocks.

193. (C) Social vulnerability
Social vulnerability refers to the susceptibility of a community to hazard impacts based on its internal social structures, hierarchies, and networks. Social status, such as caste, can determine access to resources, influence decision-making, and affect the level of aid received during a crisis. These social factors can either support or hinder individual and collective resilience. Addressing social vulnerability requires promoting equity, ensuring impartial

and providing social safety nets, governments can enhance people's capacity to prepare for and recover from hazards. Sustainable risk reduction requires addressing the underlying economic inequalities that make certain groups more susceptible to shocks, ensuring that development progress is robust and protects the most vulnerable populations.

157. (B) ensuring that women are included in committees that decide on resource allocation for rebuilding.
For recovery to be truly equitable, it is essential to involve women in the decision-making processes that determine how resources are distributed. Women possess unique knowledge about their households and communities and can identify specific needs that might otherwise be overlooked. Ensuring their participation in recovery committees promotes fairness and ensures that the needs of all community members are addressed. This inclusive approach is a best practice in gender-sensitive disaster management, helping to ensure that recovery efforts support long-term resilience for everyone.

158. (B) Children and disasters.
Disasters often disrupt essential health services, including immunization programs and routine medical care for children. This interruption poses a significant risk to their long-term health and development. Addressing these specific concerns is a core part of child-sensitive disaster management. It requires planning for the rapid resumption of pediatric services and ensuring that children's health needs are prioritized during the recovery phase. By focusing on these issues, disaster managers can mitigate the long-term consequences of a crisis and support the healthy development of affected children.

159. (B) drawing on life experience and established social support networks.
Older adults often have significant resilience derived from having navigated previous life challenges and crises. Their extensive social networks and life experience provide valuable coping mechanisms during disasters. They may have established ties with neighbors and community leaders that can be utilized for support. Recognizing and supporting these internal strengths is a key part of elderly-sensitive disaster management. Rather than viewing them only as vulnerable, this approach acknowledges the social capital and wisdom that older individuals bring to community resilience and recovery.

160. (B) P-2, Q-4, R-1, S-3
Disability terminology follows a logical structure. An impairment is the underlying physical condition, such as a spinal cord injury. A disability refers to the resulting limitation in activity, such as being unable to walk. A handicap is the social or environmental disadvantage, like a wheelchair user facing stairs. Accessibility guidelines aim to remove these handicaps by providing features like ramps. Understanding these distinctions is fundamental for developing professional and inclusive disaster management strategies that address both individual needs and environmental barriers to ensure equitable safety.

161. (B) recognizing the interconnectedness of economic, social, and environmental systems.
Sustainable development is based on the principle that these three systems must be balanced to ensure long-term well-being. This interconnected approach is essential for reducing disaster risk, as it acknowledges that economic growth should not come at the expense of environmental buffers or social equity. By maintaining healthy ecosystems and promoting social justice, communities become more resilient to shocks. Integrating risk reduction into this holistic framework ensures that development is robust and protects the interests of both current and future generations from environmental and societal threats.

162. (A) The universal adoption of community-based disaster risk management (CBDRM).
CBDRM is a global best practice that emphasizes the active participation of local communities in all aspects of risk management. By involving those most affected by hazards, disaster managers can develop plans that are grounded in local knowledge and needs. This approach empowers communities, builds social capital, and ensures that risk reduction measures are culturally appropriate and sustainable. The widespread adoption of CBDRM represents a shift toward more participatory and localized disaster management, recognizing that communities are

Click Here to Buy book on Amazon

crops or flood-resilient infrastructure for small businesses, disaster managers can help people maintain their income despite environmental shocks. Diversifying income sources also helps reduce the impact of any single disaster. The goal is to ensure that households have the resources and capabilities to withstand hazard events and recover more quickly. Integrating livelihood protection with DRR is essential for building robust and self-reliant communities that are better prepared to manage and thrive despite environmental challenges.

200. (B) P-2, Q-1, R-4, S-3
Inclusive disaster risk reduction requires targeted actions that address the unique challenges of each vulnerable group. Persons with disabilities need accessible information and physical environments. Women require safety through well-lit facilities and participation in camp management. The elderly need medication access and mobility aids to maintain their health. Children benefit from safe play spaces and educational continuity to support their recovery. Implementing these specific measures ensures that the rights and safety of all individuals are prioritized, leading to more equitable and effective disaster management outcomes that address the diverse needs of the entire community.

201. (A) Religious beliefs influencing risk perception and behavior (e.g., fatalism).
Cultural and religious beliefs can significantly shape how individuals perceive and respond to hazard risks. For example, fatalistic beliefs may lead people to perceive disasters as inevitable, potentially reducing their motivation to engage in preparedness activities. Conversely, religious institutions often provide strong social support networks that are vital for community resilience. Understanding these religious dimensions is essential for disaster managers to develop effective communication strategies and to build on the strengths of local support systems. A professional approach involves respecting religious diversity while promoting proactive safety measures and education within all faith communities.

202. (B) Forming informal support groups to share resources, childcare, and emotional support.
Women often demonstrate remarkable resilience after disasters by organizing and supporting each other. Forming informal groups allows them to pool resources, provide collective childcare, and offer mutual emotional support, which is vital for survival and recovery. These social networks are a key coping strategy that builds on existing communal ties. Recognizing and supporting these women-led initiatives is a best practice in gender-sensitive disaster management. By strengthening these social foundations, disaster managers can support the long-term recovery of households and foster more resilient communities that are empowered through collective action and mutual support.

203. (B) understanding and taking into account the specific needs and barriers faced by PwD in all DM activities.
A disability-sensitive approach goes beyond simple awareness to actively consider and address the specific obstacles encountered by persons with disabilities. This involves ensuring that all information is accessible, physical environments are barrier-free, and that PwD are included in all stages of planning and response. This perspective acknowledges the diverse requirements of individuals with different types of impairments and seeks to provide equitable safety for all. By integrating these considerations into every aspect of disaster management, authorities can ensure that risk reduction measures are truly inclusive and respect the rights and dignity of every individual in the community.

204. (B) pockets of extreme vulnerability, such as in informal settlements, existing alongside areas of high resilience.
Urban environments are characterized by significant spatial and social inequality. While some areas of a city may have modern, resilient infrastructure, other sections—particularly informal shanty settlements—face extreme risk due to poor location and inadequate services. This contrast means that disasters often have a disproportionate impact on certain neighborhoods. Professional urban risk management must identify these pockets of vulnerability and implement targeted interventions to improve safety and basic services for marginalized residents. Averting widespread crises in cities requires addressing these inequities

Downloaded from www.pdf.tube

these intersections allows disaster managers to understand the complex nature of vulnerability and to identify the most marginalized individuals who require targeted support. This perspective is essential for developing truly inclusive and effective disaster management strategies that ensure that aid reaches those who face the most significant obstacles to safety and recovery.

217. (C) Extensive social networks and life experience.
Older adults possess significant social capital and internal resilience developed over decades of living through various challenges. Their strong social ties with neighbors, family, and community groups provide a vital support system during disasters. Furthermore, their life experience offers valuable coping strategies and traditional knowledge that can guide their actions. Recognizing and supporting these internal strengths is a key part of elderly-sensitive disaster management. Rather than viewing them only through their physical vulnerabilities, this approach acknowledges the social and psychological assets that older individuals contribute to their own safety and the broader resilience of their communities.

218. (B) The building's inaccessible design.
According to the social model of disability, a handicap is created by environmental barriers that prevent an individual from participating fully in activities. In the given scenario, the wheelchair user is disabled by the building's failure to provide an accessible entrance, such as a ramp, rather than by their own physical impairment. This perspective shifts the responsibility to society to remove these obstacles and ensure universal access. In disaster management, this model emphasizes the need to ensure that all information, evacuation routes, and shelters are physically accessible to everyone, ensuring equitable safety regardless of physical or mental conditions.

219. (B) able to withstand, adapt to, and recover quickly from shocks.
Disaster resilient infrastructure is designed with the flexibility and strength to maintain essential services even during extreme hazard events. This involves using robust materials, redundant systems, and adaptive designs that allow for quick repair. The goal is to minimize the cascading failures that occur when systems like power, water, and transportation are disrupted. Resilient infrastructure is a cornerstone of professional risk management and sustainable development. By ensuring that critical systems can handle shocks, authorities can protect public safety and the regional economy, ensuring that the entire community can recover more effectively after a hazard impact.

220. (C) a literary and cultural source within the Indian Knowledge System.
Cultural traditions like folk songs and stories often preserve the historical memory of environmental hazards and the strategies used by previous generations to survive. These literary and oral records are valuable components of the Indian Knowledge System, offering insights into long-term disaster patterns and time-tested coping mechanisms. By studying these cultural sources, disaster managers can identify culturally appropriate and effective methods for risk reduction and community preparedness. Integrating this traditional wisdom with modern scientific knowledge enhances the local relevance and effectiveness of disaster management strategies, fostering more resilient communities that are grounded in their own history.

NODIA

221. (A) losses in the non-formal or 'grey' economy.
A significant challenge in economic assessments is capturing losses that occur in the informal sector, which is often not tracked in official records. This includes small-scale enterprises, home-based industries, and subsistence agriculture, which are common in many regions. Since these activities are not formalized, the losses sustained by those involved are often overlooked or underestimated in traditional disaster assessments. Accurate economic evaluations must develop methods to account for these "grey" economy losses to provide a complete picture of the total impact of a disaster and to ensure that recovery programs reach all affected segments of the population.

222. (A) DRR efforts can be an effective tool for poverty alleviation.
Disaster risk reduction and poverty alleviation are deeply interconnected and mutually supportive goals. By reducing the susceptibility of poor communities to hazards, governments can protect their assets and income sources,

management and hazard assessments into urban planning. By maintaining permeable surfaces and improving drainage, cities can mitigate these land-use impacts and build resilience against future environmental shocks and climate-related hazards.

211. (A) Promoting a multi-stakeholder approach involving government, civil society, the private sector, and communities.
Effective disaster risk reduction requires the collaboration and expertise of all sectors of society. A multi-stakeholder approach ensures that different perspectives and resources are utilized, leading to more comprehensive and effective strategies. By involving civil society, the private sector, and local communities, governments can build broad-based support for risk reduction measures and ensure they are locally relevant and sustainable. This collaborative model is a global best practice that recognizes that everyone has a role to play in building resilience and protecting communities from the increasingly complex threats posed by natural and human-induced hazards.

212. (A) Livelihood security
Livelihood security refers to the capacity of a household to maintain a sustainable means of living. When a family loses its primary income earner due to a disaster, its economic stability is profoundly threatened. This loss can lead to long-term poverty and an inability to recover from other disaster impacts. Protecting and strengthening livelihoods is therefore a fundamental part of building resilience. Disaster recovery programs must provide targeted support to help households restore their income sources and regain economic independence, ensuring they can withstand future environmental and financial shocks and maintain their overall well-being and security.

213. (B) equitable and impartial humanitarian assistance.
Humanitarian assistance is based on the principles of humanity, neutrality, and impartiality, which mandate that aid must be provided based on need alone and without discrimination. Caste-based discrimination in access to relief or shelters is a direct violation of these core principles. Effective disaster management must ensure that all members of society, regardless of their social status, have equal access to safety and resources. Professional and equitable risk reduction requires addressing social hierarchies and ensuring that aid distribution systems are transparent and inclusive, protecting the rights and dignity of every citizen during a crisis.

214. (B) a gender-blind practice that may not be gender-sensitive.
Gender-blind practices occur when the specific needs and risks of men and women are ignored. While separate queues might be intended to organize distribution, failing to address the safety and privacy of women in those queues can leave them vulnerable to harassment or exclusion. A truly gender-sensitive approach would intentionality plan for women's security and ease of access. This illustrates that simple administrative changes are not enough; professional disaster management requires a deep understanding of gender dynamics to ensure that all interventions are truly inclusive and do not inadvertently reinforce existing disadvantages or risks for women and girls.

215. (B) resilience and coping ability.
Psychological well-being is a core component of overall resilience. Children who experience high levels of distress after a disaster may face long-term developmental challenges and a reduced capacity to manage future crises. Addressing this trauma through psychosocial support is essential for building their internal coping mechanisms. By focusing on children's emotional recovery, disaster managers can mitigate the lasting impacts of trauma and support healthy developmental outcomes. This sensitive approach recognizes that building resilience requires more than physical safety; it also involves nurturing the psychological and emotional strength that allows children to navigate and recover from adversity.

216. (C) Analyzing the unique vulnerability of a disabled woman from a low-income household.
Intersectionality examines how multiple, overlapping social identities create specific and intensified risks for individuals. A disabled woman from a poor household faces a combination of physical, gendered, and economic barriers that a person with only one of those attributes might not experience. Analyzing

Click Here to Buy book on Amazon

that everyone, regardless of their impairments, can stay safe and maintain their dignity during a crisis. This rights-based approach rejects the idea that PwD should be isolated or left solely to their families. Instead, it promotes professional and equitable support that recognizes the rights and needs of all individuals, ensuring that every member of the community is protected and cared for during humanitarian emergencies.

250. (A) Unsustainable development increases disaster risk, while disasters can erode key development gains.
Disaster risk and development are deeply and complexly interconnected. Unsustainable practices, such as deforestation or rapid urbanization without proper zoning, create new environmental hazards. Conversely, a single disaster can destroy years of socio-economic progress in a community, exhausting resources and setting back growth. Therefore, it is essential to integrate risk reduction measures into all development planning to ensure long-term sustainability. While development can reduce risk if done correctly, it is not an automatic process. All developmental projects must prioritize resilience to protect both social and economic investments. This integrated approach ensures that growth is robust and prevents the creation of new vulnerabilities, safeguarding the well-being of both current and future generations.

251. (B) Differential vulnerability
Differential vulnerability emphasizes that disaster impacts are not uniform across populations. It is shaped by a complex interplay of social, economic, and political factors. Various demographic and social categories, such as caste, class, gender, and age, determine how groups experience risks and recover. This concept moves beyond generic resilience toward targeted and equitable disaster management interventions.

252. (A) As a unique and compounded form arising from overlapping social categories
Intersectionality describes how an individual's identity is composed of multiple overlapping social categories. These categories do not act in isolation but create unique, compounded forms of vulnerability. This framework acknowledges that the risk profile of a person at the intersection of several disadvantages is greater than the simple sum of individual factors, leading to complex and cascading impacts.

253. (C) an initial shock leads to a series of subsequent and worsening impacts.
Cascading vulnerabilities occur when an initial disaster shock triggers a chain of subsequent and often worsening consequences. These impacts are amplified by intersecting social disadvantages and existing structural inequalities. This process demonstrates how initial exposure can lead to further harm, particularly for marginalized groups, making the recovery process significantly more difficult and complex for the affected populations.

NODIA

254. (D) A disabled, elderly woman from a religious minority group in a remote village facing a disaster
Intersectionality involves the convergence of multiple social identities that create specific layers of disadvantage. A disabled, elderly woman from a religious minority in an isolated location faces risks from age, disability, gender, religion, and geography simultaneously. These overlapping categories interact to produce a unique risk profile that generic disaster management approaches might overlook, reflecting the complexity of real-world vulnerability.

255. (C) To design targeted and equitable interventions that address specific group needs
Recognizing differential vulnerability and intersectionality helps disaster management professionals move beyond one-size-fits-all approaches. It necessitates the design of targeted and equitable interventions that address the specific needs of diverse groups. By understanding the root causes of vulnerability and how they overlap, practitioners can ensure that resources are allocated fairly and that the most marginalized populations receive appropriate support.

256. (B) The socially constructed roles and expectations of gender
Gendered vulnerability arises from the social construction of roles, responsibilities, and expectations assigned to different genders. These societal norms and power dynamics create disparities in exposure to risks and capacities for response. Unlike biological sex, gendered factors involve social hierarchies and cultural

preventing them from falling deeper into economic deprivation after a crisis. Conversely, improving livelihoods and providing social protection enhances people's capacity to invest in safe housing and preparedness. Sustainable risk reduction requires addressing these underlying economic inequalities. By integrating DRR with poverty reduction, authorities can build long-term resilience and ensure that developmental progress is robust and protects the most vulnerable segments of society from environmental shocks.

223. (A) Ensuring women's equal participation in community disaster management committees.
For disaster management to be truly inclusive, it is essential that women have a meaningful voice in all aspects of planning and decision-making. Women possess unique knowledge and perspectives that can improve the effectiveness of risk reduction strategies. Ensuring their participation in community committees promotes fairness and ensures that their specific needs and capacities are recognized and addressed. This inclusive approach is a best practice in gender-sensitive disaster management, helping to foster more resilient and equitable communities. By empowering women as active stakeholders, authorities can ensure that disaster management efforts benefit all members of the community and do not reinforce social inequalities.

224. (C) They have the same coping capacities and resilience as adults.
Children possess their own unique forms of resilience, but they do not have the same physical or psychological coping capacities as adults. Their developmental stage means they have different ways of processing trauma and managing stress. Furthermore, their lack of life experience and dependency on caregivers make them more susceptible to the impacts of disasters. Effective disaster management must recognize these differences, providing age-appropriate support and child-sensitive interventions. Treating children as if they have adult capacities overlooks their specific needs and can lead to ineffective and potentially harmful disaster management practices that fail to protect their rights and well-being.

225. (A) Both A and R are true and R is the correct explanation of A.
Persons with disabilities face disproportionate risks during disasters because they often encounter significant social and physical barriers. Lack of accessible warnings, evacuation routes, and relief services, combined with the loss of essential assistive devices, significantly increases their vulnerability. These external obstacles, rather than the impairment itself, are what primarily threaten their safety. Professional disaster management must address these barriers through inclusive planning and accessibility measures. By recognizing these challenges, authorities can develop more effective risk reduction strategies that respect the rights of all citizens and ensure equitable protection and support for PwD throughout the entire disaster cycle.

226. (A) The meaningful participation of PwD in all aspects of DRR.
Disability-inclusive disaster risk reduction advocates for the active involvement of persons with disabilities in all planning and decision-making processes. This ensures that their unique knowledge and needs are recognized and addressed. Inclusive DRR rejects the view of PwD solely as passive aid recipients, instead recognizing them as active contributors to community safety. By promoting their meaningful participation, disaster managers can develop more effective and inclusive strategies that benefit the entire community. This rights-based approach promotes dignity, accessibility, and equitable safety, ensuring that no one is overlooked or excluded during a crisis because of their physical or mental impairments.

227. (A) understanding urban risk.
Mapping critical infrastructure against hazard maps is a vital step in assessing the potential impact of disasters on urban areas. This process identifies which essential services, such as hospitals and power plants, are located in high-risk zones like floodplains or seismic areas. By understanding these spatial vulnerabilities, city planners can prioritize retrofitting projects or develop effective contingency plans to ensure that essential services remain functional during a crisis. This professional approach to urban risk management is essential for protecting the dense population and complex economy of modern

Downloaded from www.pdf.tube

cities, ensuring that the urban environment is both safe and resilient to environmental hazards.

228. (D) A pastoralist community that migrates with its livestock based on seasonal patterns to avoid drought.
The Indian Knowledge System includes time-tested livelihood strategies that are specifically adapted to local environmental variability. Pastoralist migration is a prime example of using traditional wisdom to manage hazard risks like drought. By moving their livestock based on seasonal patterns, these communities ensure the survival of their primary income source and maintain their economic well-being despite environmental challenges. Recognizing and supporting such indigenous livelihood preferences is important for culturally appropriate risk reduction. These traditional practices provide sustainable and resilient methods for managing resources and navigating hazards, contributing to long-term community resilience and economic stability in various hazard-prone regions.

229. (B) Indirect cost
Indirect costs represent the flow-on economic consequences of a disaster that result from the initial physical damage. The loss of wages for workers due to factory closure is a classic example of an indirect cost. This loss of income stems from the disruption of business activities rather than the destruction of a specific physical asset. These costs can have significant impacts on household well-being and the regional economy, often persisting long after the initial event. Accurate economic assessments must capture these broader impacts to provide a complete understanding of the total financial burden of a disaster and to plan for effective and sustainable recovery.

230. (B) a surplus of food or savings to rely on.
Poverty significantly limits a family's capacity to withstand the economic shocks of a disaster. For those living in economic deprivation, there is often no financial reserve or surplus of resources to fall back on when hazards like drought lead to food shortages. This lack of a safety net means that even a moderate disaster can have catastrophic consequences for household survival. Addressing this economic vulnerability requires poverty reduction strategies and the provision of social safety nets. By improving economic status and ensuring access to basic needs, governments can enhance the resilience of the poor and reduce their susceptibility to environmental and financial shocks.

231. (D) a person living on a flood-prone riverbank versus a person living on high ground in the same town.
Differential vulnerability based on location refers to how physical positioning determines an individual's exposure to specific environmental hazards. In a town, someone living on a flood-prone riverbank faces a much higher degree of risk than someone living on elevated terrain, even if their socio-economic status is identical. This spatial dimension of risk is a fundamental factor in assessing community vulnerability. Identifying these high-risk zones allows disaster managers to prioritize mitigation and preparedness measures, such as structural protection or evacuation planning, to ensure that those in the most dangerous locations are protected and receive timely warnings during a crisis.

232. (D) using separate focus groups for men and women to understand their unique problems and needs.
A gender-sensitive needs assessment must create safe and appropriate environments for both men and women to share their experiences. Using separate focus groups ensures that women can speak freely about their specific concerns, such as safety risks or health needs, which might not be shared in mixed-gender settings. This approach allows disaster managers to identify the unique challenges faced by each group and to tailor recovery programs accordingly. By ensuring that all voices are heard, authorities can provide more equitable and effective support that addresses the diverse needs of the entire community, promoting a more inclusive and resilient recovery process.

233. (A) provide a safe environment for play, informal education, and psychosocial support.
Child-friendly spaces are essential interventions that prioritize children's emotional and developmental needs after a disaster. These safe environments offer children a sense of normalcy and stability, which is vital for their recovery from trauma. Through play and informal education, children can process their experiences

NODIA

and regain their confidence. These spaces also protect children from immediate risks like abuse or separation from their families. By providing targeted support for the younger generation, disaster managers can mitigate the lasting psychological impacts of a crisis and support healthy developmental outcomes, fostering resilience and well-being among children in all hazard-affected communities and temporary shelter settings.

234. (D) the difficulty they may face in navigating bureaucracy to access compensation and support.
Older individuals often encounter significant social and administrative barriers during the disaster recovery phase. Navigating the complex bureaucracy required to access government aid or insurance compensation can be challenging for those with limited technological literacy or mobility. Furthermore, social isolation can prevent them from receiving the information and assistance needed to navigate these systems. Elderly-sensitive recovery must prioritize simplifying access to support and providing personal assistance to help older adults claim their rights. Addressing these administrative obstacles is essential for ensuring that older populations receive the necessary resources to rebuild their lives and maintain their dignity after a crisis.

235. (C) legal framework for ensuring their inclusion and protection in disaster situations in India.
India's Rights of Persons with Disabilities Act (2016) is a landmark piece of legislation that provides a rights-based foundation for inclusive disaster management. It mandates that authorities take all necessary measures to ensure the protection and safety of PwD during humanitarian emergencies. This legal framework shifts the responsibility for accessibility and inclusion from discretionary aid to a mandatory obligation. By enshrining these rights in law, the act ensures that PwD are treated as equal citizens with a right to professional and equitable support during and after crises. This legislation is fundamental for promoting a culture of inclusion and ensuring the safety of all individuals in the community.

236. (D) essential services like hospitals are located in high-risk zones and become non-functional.
The failure of urban planning is often most visible when critical infrastructure is disabled by the hazards it was meant to withstand. When essential services like hospitals or emergency centers are located in known flood plains or seismic zones, the entire community's safety is compromised. This poor spatial planning can lead to higher fatalities and a significantly hindered disaster response. Effective urban planning must integrate hazard assessments into land-use decisions, ensuring that all critical infrastructure is located in safe areas or built to the highest resilience standards. This professional approach is essential for protecting urban populations and maintaining social and economic stability during disasters.

237. (D) time-tested local and community practices for dealing with familiar hazards.
Coping strategies within the Indian Knowledge System refer to the localized and culturally appropriate methods that communities have developed over generations to manage recurring environmental risks. These practices often use local materials and rely on community cooperation. For example, traditional water harvesting and seasonal migration are time-tested ways of managing environmental variability. Recognizing and supporting these indigenous strategies is important for culturally appropriate and sustainable disaster risk reduction. By valuing this traditional wisdom, disaster managers can enhance local resilience and promote self-reliance, ensuring that risk reduction measures are effective and grounded in the actual experiences and practices of the communities they are meant to protect.

238. (D) ability to mobilize financial resources (e.g., through reserves, credit, or aid) during and after a crisis.
Assessing the financial capacity of a local government involves evaluating its potential to manage the economic shocks of a disaster. This includes not just its current budget but also its ability to access emergency reserve funds, reallocate resources from other departments, and secure credit or external aid quickly. Since disasters are unpredictable in scale, having the fiscal flexibility to mobilize resources is essential for a rapid and effective response. High financial

Click Here to Buy book on Amazon

capacity is a key indicator of economic resilience, protecting both public services and the broader regional economy from long-term damage and ensuring that the municipality can support a robust and sustainable recovery process.

239. (D) building economic resilience at the household and community level.
Protecting and diversifying livelihood options helps households and communities withstand and recover from shocks such as disasters. By having multiple income sources or secure employment, people reduce vulnerability and financial loss during crises. This approach strengthens coping capacity, supports recovery, and is therefore a core strategy for building economic resilience at both household and community levels.

240. (D) how poverty leading to poor nutrition, which in turn increases susceptibility to disease after a flood.
Cascading vulnerabilities occur when different weaknesses in a community interact and amplify each other, creating a complex risk profile. A classic example is how economic deprivation can lead to poor nutrition, which then increases an individual's susceptibility to infectious diseases in the aftermath of a disaster like a flood. This interaction multiplies the initial impact of the hazard, leading to more severe health consequences. Identifying these interdependencies is essential for professional risk management. By addressing the root causes of vulnerability through integrated strategies, disaster managers can prevent these compound failures and build more robust and resilient communities that are better prepared to manage complex environmental shocks.

241. (B) Gender-blind
A disaster response that fails to account for the different needs, roles, and vulnerabilities of men and women is termed gender-blind. Such an approach assumes that the impacts of a disaster are identical for everyone, which can lead to ineffective interventions and the exclusion of certain groups from essential services. For example, gender-blind planning might overlook women's specific safety and health needs in relief camps. True inclusion requires a gender-sensitive approach that recognizes these differences and ensures that interventions are equitable and appropriately tailored. Moving away from gender-blind practices is essential for promoting professional and equitable disaster management that respects the rights and needs of all members of society.

NODIA

242. (D) Creating a registry of older adults with specific needs (e.g., mobility, medical).
For an elderly-sensitive disaster plan to be effective, authorities must have precise information about the vulnerable older population. Creating a registry that includes their locations and specific needs, such as chronic medical conditions or mobility support, allows responders to target their efforts during evacuations and ensure that appropriate aid is delivered. This proactive approach ensures that isolated or highly dependent elderly individuals are not overlooked during a crisis. By maintaining these registries, disaster managers can enhance the safety and well-being of older people, reflecting a commitment to inclusive and professional risk management that ensures that no one is left behind during an emergency or humanitarian crisis.

243. (D) providing information in various formats like Braille, large print, audio, and simple language.
Inclusive risk communication ensures that all members of the community can receive and understand vital safety information, regardless of their physical or cognitive impairments. This requires developing IEC materials in multiple accessible formats, such as Braille for the blind, large print for those with low vision, and simple language for those with intellectual disabilities. Using audio and visual aids also ensures wider accessibility. This redundancy in communication prevents information gaps and ensures that everyone has the necessary time and knowledge to stay safe during an emergency. Professional disaster management prioritizes these inclusive communication strategies to ensure that the entire population is equally informed and prepared to handle hazard impacts.

244. (D) creating new, unplanned settlements along its route in hazardous areas.
Large development projects like highways can inadvertently increase disaster risk by encouraging rapid, unplanned growth along their routes. These new settlements are often built

without proper zoning or building codes and may be located in hazardous areas like floodplains or unstable slopes. This expansion increases the number of people and assets exposed to environmental threats. Effective risk reduction requires integrating hazard assessments into all infrastructure planning and ensuring that new developmental growth is steers away from high-risk zones. By addressing these unintended consequences, authorities can ensure that development projects contribute to community well-being without creating new vulnerabilities or exacerbating existing risks for the regional population and its essential infrastructure.

245. (B) the loss of booking revenue for the next six months due to a decline in tourism.
Indirect costs represent the flow-on economic consequences of a disaster that stem from the initial physical damage but manifest as disruptions in economic activity. The loss of booking revenue for a hotel is a classic example, as it results from a decrease in tourism and regional accessibility following the disaster. These losses can be substantial and can persist for a long time, affecting the local economy more than the immediate physical damage to buildings. Accurate economic assessments must capture these broader impacts to provide a complete understanding of the total financial impact of a hazard event and to plan for effective, sustainable, and inclusive recovery for all sectors of the economy.

246. (D) Nationality for passport purposes is not a vulnerability dimension.
Vulnerability is determined by social, economic, physical, and cultural factors that influence a person's susceptibility to hazard impacts. Standard dimensions include caste, gender, age, disability, and economic status. These attributes shape access to resources, physical capacity, and social support. While nationality may affect legal status, it is not a primary dimension used to analyze the underlying circumstances that make an individual more vulnerable to the damaging effects of a disaster. Effective risk reduction requires focusing on the systemic social and physical factors that create risk, ensuring that aid and preparedness measures are targeted toward those who are most susceptible to environmental and human-induced hazard events within their own communities.

247. (A) To ensure that both men and women have equal opportunities to access resources for rebuilding their livelihoods and homes.
For recovery to be truly equitable and inclusive, it is essential that the resources provided are accessible to all members of the community, regardless of gender. A gender-inclusive approach ensures that both men and women receive the necessary support to restore their homes and economic activities. This involves addressing barriers that women might face, such as lack of land titles or exclusion from financial systems. By providing equal opportunities for rebuilding, disaster managers can promote a more robust and resilient recovery that does not reinforce existing social inequalities. This professional approach to recovery supports the long-term well-being and economic independence of all survivors, fostering a more equitable and stable society.

NODIA

248. (D) injured, distressed, or separated from the child.
Children's vulnerability is profoundly influenced by their developmental stage, which makes them dependent on adults for safety and guidance. In the aftermath of a disaster, this vulnerability is heightened if their caregivers are themselves affected by the event. Injured, emotionally distressed, or separated adults may be unable to provide the necessary protection and support, leaving children at significant physical and social risk. Professional disaster management must prioritize child protection and ensure that family reunification is a priority. By providing support for parents and ensuring children are safe and cared for, disaster managers can mitigate the psychological and physical impacts of a crisis on the younger generation, promoting healthy recovery and resilience.

249. (A) Ensuring shelters are physically accessible and have adequate support services for PwD.
For a displacement center to be truly inclusive, it must be designed with the specific needs of persons with disabilities in mind. This includes providing physical accessibility through ramps and adapted facilities, as well as ensure that appropriate health and support services are available. Inclusive shelter management ensures

and building resilience across all urban sectors, ensuring that every resident is protected.

205. (A) Both A and R are true and R is the correct explanation of A.
The total impact of a disaster is far broader than the immediate physical damage to property. Indirect costs, such as the loss of business revenue and production, and welfare losses, such as psychological trauma and social disruption, constitute a major portion of the overall burden. These non-physical impacts can persist long after the initial hazard event and can have more profound consequences for community well-being and economic growth. Accurate disaster assessments must capture this full spectrum of impacts to plan for a comprehensive recovery that addresses both the physical and social needs of the affected population.

206. (A) physical and psychological dependency on caregivers.
Children's vulnerability is primarily rooted in their developmental stage, which makes them dependent on adults for their basic needs and physical safety. In the chaos of a disaster, any disruption in caregiving, such as parental injury or separation, significantly heightens the risk for children. They may also lack the experience to process traumatic events without adult support. Professional disaster management must prioritize children's protection and ensure that family units are kept together. By addressing this fundamental dependency, disaster managers can provide more effective safety and support, ensuring the rights and well-being of the younger generation are safeguarded.

207. (D) Age and Gender Disaggregation
To understand the different impacts of a disaster on various groups, it is essential to collect and analyze data specifically by age and gender. This disaggregation allows disaster managers to identify the unique vulnerabilities and needs of men, women, and children. Without this data, interventions may be generic and fail to address the specific challenges faced by certain groups, such as maternal health needs or child protection risks. Accurate data collection is a cornerstone of professional and equitable disaster management, ensuring that all people receive appropriate and timely assistance tailored to their specific circumstances.

208. (C) P, Q, and R only
Older individuals face a range of physical, health, and social challenges that heighten their disaster risk. Mobility issues and attachment to their homes can make them reluctant to evacuate. Chronic health conditions may worsen under stress and lack of medical access. However, they also possess valuable traditional knowledge that can contribute to community resilience. They are not a homogenous group, as their needs and capacities vary significantly based on their personal circumstances. Recognizing both their vulnerabilities and their potential contributions is essential for elderly-sensitive disaster management that respects their dignity and ensures their safety during environmental crises.

209. (B) understand their specific needs for warning, evacuation, and shelter to plan an inclusive response.
Identifying persons with disabilities in the community before a disaster is a critical step in proactive planning. This information allows disaster managers to ensure that warnings are provided in accessible formats, that specialized transportation is available for evacuation, and that shelters meet physical accessibility requirements. By understanding these specific needs, authorities can plan a response that is truly inclusive and ensures that no one is left behind. This professional approach to risk management prioritizes the rights and safety of all individuals, reflecting a commitment to equitable and impartial disaster response for all community members.

210. (B) It can increase risk by replacing permeable surfaces with impermeable ones, leading to more runoff and flooding.
Land-use changes, especially rapid urbanization, significantly alter the natural landscape and its ability to manage water. Converting permeable soil into impermeable surfaces like concrete and asphalt prevents rainwater from soaking into the ground, leading to increased runoff and higher flood peaks. This shift can exacerbate waterlogging and flash floods, posing a major threat to both property and safety. Effective disaster risk reduction requires integrating water

Downloaded from www.pdf.tube

expectations that influence how men and women access information, utilize resources, and experience the disaster cycle phases.

257. (D) Recognizing and addressing the distinct needs and vulnerabilities of different genders
A gender-sensitive approach involves the active recognition and addressing of the unique needs and vulnerabilities associated with different gender identities. It requires practitioners to look beyond generic strategies and implement measures that account for social disparities. This includes collecting gender-disaggregated data and ensuring that disaster response and recovery efforts effectively tackle systemic issues like livelihood security and protection for everyone.

258. (A) gender roles and norms impact individuals from preparedness through to recovery.
Gender differentials permeate every stage of a disaster, including preparedness, mitigation, response, and recovery. Socially constructed norms influence who receives warnings, who performs high-risk rescue tasks, and who manages household resources under stress. Addressing these differences is essential because the impacts of gender roles are continuous rather than limited to a single phase, necessitating inclusive and sensitive strategies throughout.

259. (C) Sex is biological, while gender is a social construct.
Sex refers to the biological attributes of individuals, whereas gender encompasses socially constructed roles, responsibilities, and expectations. This distinction is critical in disaster management because it highlights that vulnerabilities often stem from social structures rather than innate biological traits. Understanding gender as a social construct allows for interventions that address the power dynamics and societal norms that create risk.

260. (A) women taking on increased caregiving duties and managing scarce household resources.
Gendered coping strategies reflect how societal expectations influence resilience and recovery actions. Women often undertake expanded caregiving roles and the management of household resources during crises, often under significant stress. These roles are tied to social norms regarding domestic responsibilities. Recognizing these specific strategies is vital for developing effective support systems that alleviate the unique burdens placed on different genders.

261. (D) To recognize children's specific vulnerabilities and capacities.
A child-centered approach to disaster risk reduction acknowledges that children are not just passive victims but individuals with specific vulnerabilities and unique capacities. This perspective integrates children's needs throughout the disaster cycle and involves them in planning processes. By focusing on children's rights and protection, this approach aims to build resilience while addressing the physical and cognitive development stages of the younger generation.

262. (B) Because of their physical, cognitive, and psychosocial development stages.
Children's vulnerability stems from their unique developmental stages, including physical, cognitive, and psychosocial aspects. They are more susceptible to illness, malnutrition, and injury compared to adults. Additionally, their high dependency on caregivers and the potential for long-lasting psychological trauma from disaster events increase their risk profile. Effective disaster management must account for these specific developmental factors to ensure adequate protection.

NODIA

263. (C) Designing early warning alerts that are understandable and accessible to children.
Child-sensitive disaster management ensures that all interventions, including early warning systems and relief distribution, are designed with a deep understanding of children's requirements. An example is creating alerts that are easily understood and accessed by children. This approach prioritizes children's rights and protection by adapting formal systems to meet the specific communication and safety needs of younger populations during crises.

264. (D) inclusivity is about participation, while sensitivity is about design and implementation.
Child-inclusive disaster management focuses on the active participation and listening to children's perspectives during the planning process. In contrast, child-sensitive management

act as natural buffers against storm surges and coastal erosion. When these ecosystems are removed, the natural capacity to buffer hazards is lost, leaving coastal communities more exposed to the impacts of cyclones and floods. This illustrates how economic development can compromise long-term safety.

281. (A) It is derived from centuries of local experience with environmental hazards.
The Indian Knowledge System in Disaster Management is a rich repository of traditional practices evolved over centuries. It is based on direct local experience with environmental hazards and is deeply embedded in the sociocultural fabric of communities. This system includes indigenous early warning signs, specialized settlement patterns, and community-based coping strategies that offer valuable, context-specific insights for modern disaster risk reduction efforts.

282. (B) Observing animal behavior and changes in wind patterns.
Traditional early warning systems rely on local observations of the natural environment. Examples include monitoring changes in animal behavior, wind patterns, or the flowering of specific plants. These indicators have been used for generations to predict impending disasters like floods or cyclones. Integrating these indigenous observations with modern scientific methods can enhance the accuracy and local relevance of early warning systems.

283. (B) They represent an adaptive response to local hazards like flooding.
Distinctive settlement patterns, such as houses built on stilts, are manifestations of traditional knowledge and represent adaptive responses to local hazards. These architectural choices are designed to mitigate the impacts of recurring events like floods. Such practices demonstrate how communities have historically used their understanding of the environment to build resilience, providing sustainable models for disaster-resistant housing in specific geographical contexts.

284. (A) enhance the effectiveness and cultural appropriateness of interventions.
Integrating local and traditional knowledge into contemporary disaster risk reduction efforts can significantly improve the effectiveness and cultural appropriateness of interventions. Because this knowledge is rooted in the local context, it is often more readily accepted and utilized by communities. Combining indigenous wisdom with modern science creates a more robust and holistic approach to managing disaster risks across diverse social settings.

285. (C) traditional coping strategies and disaster response mechanisms.
Community-based food storage and mutual aid networks are examples of traditional coping strategies and response mechanisms. These practices are embedded in social structures and activate automatically during crises to provide immediate support. They highlight the importance of social capital and local cooperation in disaster management, showing how communities have developed their own organized systems to ensure survival and recovery.

286. (D) Direct costs pertain to physical asset damage, while indirect costs relate to disruptions in economic flow.
The primary distinction between direct and indirect disaster costs lies in the nature of the loss. Direct costs refer to the immediate damage to physical assets like buildings, crops, and infrastructure. Indirect costs, however, are consequential losses that disrupt the flow of goods and services, such as business interruptions and lost income. Understanding both is essential for a complete economic assessment.

287. (C) Loss of future income for a shopkeeper whose business was closed for months.
Indirect costs are the economic consequences resulting from a disaster that occur over time. A shopkeeper's loss of future income due to a long-term business closure is a classic example of an indirect cost. Unlike the physical destruction of the shop itself, this represents a disruption in the flow of economic activity and services, which can have long-lasting effects.

288. (B) the non-market impacts on human well-being, like trauma and health issues.
Welfare losses and damages refer to the non-market impacts a disaster has on human well-being. This

Click Here to Buy book on Amazon

reaches everyone. This approach addresses the specific barriers faced by persons with disabilities, enabling them to make informed decisions and act effectively during disaster events.

273. (D) the legal and rights-based mandate for disability inclusion in India.
Mentioning the Rights of Persons with Disabilities Act (2016) highlights the legal and rights-based mandate for including and protecting persons with disabilities in disaster management in India. This legislation requires that disaster response and risk reduction efforts are inclusive and accessible. It transforms disability inclusion from an optional charitable act into a mandatory requirement for government and emergency management agencies.

274. (A) Impairment is a problem in body function/ structure, while handicap is the resulting social disadvantage.
Impairment refers specifically to a problem in body function or structure, such as a physical or sensory limitation. In contrast, a handicap is the social or environmental disadvantage that results from an impairment or disability, which limits a person's ability to fulfill their roles. This distinction clarifies that while impairments are physical, handicaps are often created or exacerbated by societal barriers.

275. (C) a person with a mobility impairment and a person with a hearing impairment will have different needs.
Disasters affect persons with disabilities in different ways depending on the type of impairment and the environmental barriers present. For example, a person with a mobility impairment requires accessible evacuation routes, while someone with a hearing impairment needs visual warning systems. Acknowledging these diverse requirements is essential for developing comprehensive disaster management strategies that effectively support all individuals regardless of disability.

276. (A) Certain development practices can increase disaster vulnerability.
The relationship between development and disasters is bidirectional and complex. While disasters hinder development, specific development pathways can actually create or worsen disaster risk. Large-scale projects and rapid, uncontrolled land-use changes often have unintended consequences, such as altering natural drainage or degrading ecosystems. Sustainable development must therefore integrate risk reduction to avoid building new vulnerabilities while pursuing economic growth.

277. (D) By creating a false sense of security, encouraging development in hazardous zones.
Large-scale engineering projects like dams, while intended for water control, can increase disaster risk by creating a false sense of security. This often leads to inappropriate development and settlement in hazardous areas downstream. If a hazard exceeds the project's capacity, the impacts on these areas can be catastrophic, demonstrating how infrastructure meant to mitigate risk can inadvertently increase vulnerability.

NODIA

278. (B) their location in hazardous areas and lack of basic services.
Shanty settlements in urban environments are acutely vulnerable because they are often situated in high-risk zones like floodplains or steep slopes. These informal settlements typically lack basic services and are constructed from non-durable materials that cannot withstand natural hazards. The combination of geographic risk and socioeconomic deprivation makes these populations particularly susceptible to disasters, requiring targeted urban planning and risk reduction.

279. (C) designed and constructed to withstand and reduce the impact of hazards.
Disaster resilient infrastructure refers to physical structures designed and built to withstand hazard impacts and minimize service disruptions. This strategy ensures that new development contributes to risk reduction rather than increasing vulnerability. By integrating risk assessments and enforcing strict building codes, resilient infrastructure helps protect populations and ensures that critical services remain functional during and after a disaster event.

280. (D) Clearing coastal mangroves for the development of resorts.
Changes in land use, such as clearing coastal mangroves for resort development, can significantly increase disaster risk. Mangroves

(A) Providing supplementary relief and rescue support.
(B) Acting as a bridge between the community and the government.
(C) Mobilizing community participation for DRR activities.
(D) Declaring a state of national emergency.

8. Which of the following statements about People's Participation in disaster risk reduction is incorrect?
(A) It is a top-down approach where external experts dictate all actions.
(B) It ensures that local needs and priorities are incorporated into disaster management plans.
(C) It fosters a sense of ownership and sustainability of DRR initiatives.
(D) It can enhance the effectiveness and efficiency of early warning systems.

9. A Panchayat Samiti decides to create a volunteer task force for search and rescue from within the village. This action is a direct application of its role in which phase of disaster management?
(A) Response
(B) Recovery
(C) Preparedness
(D) Reconstruction

10. Match List I with List II and select the correct code:
List I: (Institution)
P. Community
Q. PRI/ULB
R. NGO
S. Media
List II: (Primary Role in DM)
1. Advocacy and supplementary support
2. Immediate response and local knowledge
3. Information dissemination and awareness
4. Local governance and plan implementation
(A) P-2, Q-4, R-1, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-1, R-2, S-3
(D) P-2, Q-3, R-4, S-1

11. What is the primary purpose of involving civil society and volunteer organizations in disaster risk reduction?
(A) To replace the functions of government agencies entirely.
(B) To act as a primary source of funding for government projects.
(C) To focus exclusively on post-disaster reconstruction activities.
(D) To leverage grassroots connectivity and mobilize community action.

12. The concept of 'People's participation' in disaster risk reduction is best described as:
(A) A passive process where communities are informed about plans.
(B) An active process empowering communities in their own protection.
(C) A one-time event focused on community consultation sessions.
(D) A system where financial contributions from the public are collected.

13. Identify the incorrect statement regarding the 'culture of safety, prevention, mitigation and preparedness'.
(A) It involves instilling disaster awareness as a core value in society.
(B) It promotes proactive measures over reactive responses.
(C) It is a one-time campaign rather than a continuous process.
(D) It encourages individuals and communities to take responsibility for their safety.

14. Consider the following Cause and Effect statements:
Cause: People's participation in risk assessment is high.
Effect: The resulting disaster management plan is more relevant and effective.
Which of the following is true regarding the relationship between the Cause and the Effect?
(A) The Cause is the direct Effect of the Effect.
(B) The Effect is a direct consequence of the Cause.
(C) The Cause and Effect are unrelated phenomena.
(D) The Effect is the cause, and the Cause is the effect.

15. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Participatory risk assessment

Downloaded from www.pdf.tube

includes increased mortality, morbidity, and psychological trauma. These losses are difficult to quantify because they involve human health and emotional states rather than physical assets or business transactions. Assessing welfare losses is crucial for understanding the true human cost of any disaster event.

289. (D) Because quantifying indirect costs and valuing welfare losses is complex.
Precise economic assessments of disasters are challenging because of the complexity involved in quantifying indirect costs and valuing welfare losses. Tracking the ripple effects of economic disruptions requires sophisticated modeling, while placing a monetary value on human well-being involves difficult ethical and methodological questions. These challenges mean that many assessments only focus on easily measured direct physical damages.

290. (A) To measure its own financial vulnerability and capacity to respond.
After identifying potential disaster threats, local governments must measure their own financial vulnerability and response capacity. This involves analyzing revenue sources, existing debt levels, and access to external financial support. By understanding their fiscal standing, governments can better prepare for the financial shocks associated with disasters and ensure they have the resources needed for effective recovery and rebuilding.

291. (C) The existence of a vicious cycle linking poverty, livelihoods, and disasters.
The central theme is the vicious cycle that links poverty, livelihoods, and disasters. Poverty acts as a driver of disaster risk, while disasters, in turn, can cause or deepen poverty by destroying livelihoods and assets. This bidirectional relationship creates a significant barrier to development, necessitating integrated strategies that address both risk reduction and poverty alleviation to break the cycle.

292. (A) By forcing people to reside in high-risk areas and poorly constructed housing.
Poverty increases disaster risk by restricting the choices available to marginalized populations. Impoverished people often live in high-risk areas like floodplains or unstable slopes because they lack other options. Additionally, they often reside in poorly constructed housing and lack the financial resources to invest in risk reduction measures or insurance, making them disproportionately vulnerable when a natural hazard strikes.

293. (D) disasters can cause or deepen poverty.
Disasters cause or deepen poverty primarily through the destruction of livelihoods. When an event disrupts agricultural cycles, fishing, or small businesses, it eliminates the primary source of income for households. This loss makes it extremely difficult for families to recover and rebuild, often erasing years of development progress and pushing them into a state of chronic economic hardship.

294. (B) poverty reduction and livelihood support strategies.
Effective disaster risk reduction cannot be achieved in isolation and must be integrated with poverty reduction and livelihood support strategies. By addressing the underlying economic conditions that create vulnerability, these integrated approaches help populations withstand shocks. Strengthening livelihoods ensures that communities have the resources and resilience necessary to recover more quickly and effectively after a disaster event occurs.

295. (C) Supporting resilient livelihoods and diversifying income sources.
A crucial strategy for breaking the poverty-disaster cycle is supporting resilient livelihoods and diversifying income sources. When households have multiple ways to earn a living, they are less vulnerable to the failure of a single sector like agriculture after a disaster. This diversification empowers people to better manage risks and provides a stronger economic foundation for long-term recovery.

296. (D) Overlapping social identities interact to create unique and compounded disadvantages.
Intersectionality argues that vulnerability is not the result of isolated factors but emerges from the interaction of multiple overlapping social identities. Categories like caste, class, gender, and age combine to create unique and compounded layers of disadvantage. This framework helps explain why individuals at the intersection

NODIA

of several marginalized identities experience risks and barriers in qualitatively different and intensified ways.

297. (A) the combination of factors creates a qualitatively different and intensified experience.
Simple addition of vulnerability factors is insufficient because intersectionality posits that the combination of identities creates an experience that is qualitatively different from the sum of its parts. For example, the specific marginalization faced by an elderly woman is not just the total of age and gender issues, but a unique form of risk that requires specialized understanding.

298. (B) By revealing power dynamics and structural inequalities that lead to acute vulnerability.
Intersectional analysis improves disaster management by revealing the underlying power dynamics and structural inequalities that produce acute vulnerability. This approach forces practitioners to look beyond generic categories and understand how specific groups are marginalized. By identifying these complex patterns of disadvantage, disaster management can move toward more equitable and targeted interventions that address the root causes of risk.

299. (B) how a person can be rendered invisible to generic relief efforts due to intersecting marginalizations.
The example illustrates how multiple intersecting marginalizations can render an individual invisible to generic relief efforts. Because her identity sits at the intersection of several disadvantages, a standard disaster response may fail to account for her specific barriers to accessing aid. This highlights the need for inclusive planning that specifically targets those whose complex identities create high levels of vulnerability.

300. (A) initial vulnerability is amplified through the disaster cycle due to intersecting identities.
Cascading impacts refer to the process where an initial vulnerability is amplified throughout the disaster cycle. Intersecting identities create layers of disadvantage that make every stage—from receiving warnings to participating in recovery—more difficult. This amplification means that marginalized individuals often face a series of worsening consequences that extend far beyond the immediate impact of the disaster itself.

www.nodia.in

Click Here to Buy book on Amazon

CHAPTER 05

Community Based Disaster Risk Reduction and Disaster Management

1. Which of the following best defines the primary role of the community in disaster management?
(A) Solely providing financial resources for reconstruction.
(B) Acting as the first responder and providing immediate assistance.
(C) Waiting for external agencies to initiate rescue operations.
(D) Formulating national disaster management policies.

2. Consider the following statements:
Statement I : Panchayati Raj Institutions (PRIs) are crucial for disaster management at the grassroots level due to their local knowledge.
Statement II : The primary function of PRIs in disaster management is limited to post-disaster fund distribution.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

3. Which of the following is considered a key responsibility of Non-Governmental Organizations (NGOs) in the pre-disaster phase?
(A) Organizing and executing large-scale evacuation operations.
(B) Enforcing strict local building codes and urban regulations.
(C) Generating awareness and capacity building among communities.
(D) Issuing and releasing official disaster warnings and alerts.

4. In the context of Community Based Disaster Risk Reduction (CBDRR), who are considered 'stakeholders'?
(A) Government officials and specialized disaster management professionals.
(B) Directly affected community members and their recognized local leaders.
(C) International aid agencies and various high-level project donors.
(D) All individuals and institutions with an interest in the process.

5. Consider the following statements regarding the roles of a community in disaster risk reduction:
I. Participating in mock drills and training programs.
II. Identifying local hazards and vulnerabilities.
III. Developing and maintaining a community disaster management plan.
IV. Solely relying on government aid for all preparedness activities.
Which of the above statement(s) is/are correct?
(A) I, II and IV
(B) II, III and IV
(C) I, II and III
(D) I, III and IV

6. Which of the following represents the most appropriate role for an Urban Local Body (ULB) in disaster mitigation?
(A) Conducting international diplomacy for securing financial aid.
(B) Implementing and enforcing zoning regulations and building by-laws.
(C) Deploying specialized military units for rescue operations.
(D) Managing and supervising the national disaster response fund.

7. All of the following are typical roles of NGOs in disaster management EXCEPT:

Downloaded from www.pdf.tube

(B) Completely ignoring the potential for various disasters to occur.
(C) Relocating entire communities away from any potential hazard zone.
(D) Managing and reducing risks that cannot be entirely eliminated.

24. Which priority of the Sendai Framework for Disaster Risk Reduction most directly relates to the role of PRIs and ULBs in enforcing building codes?
(A) Priority 3: Investing in disaster risk reduction for resilience.
(B) Priority 1: Understanding disaster risk.
(C) Priority 2: Strengthening disaster risk governance to manage disaster risk.
(D) Priority 4: Enhancing disaster preparedness for effective response.

25. Arrange the following general steps in a community-based disaster management process in a logical sequence:
I. Implementation of risk reduction activities.
II. Formation of a community disaster management committee.
III. Participatory risk assessment and analysis.
IV. Monitoring, evaluation, and revision of the plan.
V. Development of a community action plan.
(A) II, III, V, I, IV
(B) I, II, III, IV, V
(C) III, V, II, I, IV
(D) II, V, I, III, IV

26. The most effective approach to 'Conflict Resolution through Collaboration and Consensus' in community-based planning is to:
(A) Facilitate dialogue where all stakeholders can voice concerns and negotiate a mutually agreeable solution.
(B) Allow the most powerful group to make all decisions.
(C) Postpone decision-making indefinitely until everyone agrees completely.
(D) Refer all disagreements to an external legal authority.

27. What is the primary function of a 'Citizens Forum' in the context of disaster management?
(A) To act as a formal government body with legal enforcement powers.
(B) To distribute relief supplies during a disaster.
(C) To function as a commercial entity for profit.
(D) To provide a platform for citizens to voice their opinions, concerns, and participate in public decision-making.

28. Which of the following is a major 'Social Justice Challenge' in disaster management?
(A) Ensuring that all communities receive exactly the same amount of aid, regardless of need.
(B) The disproportionate impact of disasters on marginalized and vulnerable groups.
(C) The difficulty in coordinating with international aid agencies.
(D) The high cost of advanced early warning technology.

29. 'Media Advocacy for DM' is most effective when it:
(A) Focuses only on sensational and graphic imagery of the disaster.
(B) Operates independently of any factual verification.
(C) Highlights policy gaps, promotes accountability, and disseminates preparedness information.
(D) Promotes the agenda of a single political party.

30. Consider the following statements regarding the roles of Panchayati Raj Institutions (PRIs):
I. Preparation of village-level disaster management plans.
II. Ensuring implementation of building codes.
III. Acting as the nodal agency for international relations.
IV. Organizing and training village volunteer teams.
Which of the above statement(s) is/are correct?
(A) I, II and III
(B) I, II and IV
(C) II, III and IV
(D) I, III and IV

31. Building 'Resilience for Disaster Risk Management' at the community level means:
(A) The ability of a community to resist, absorb, accommodate, and recover from the effects of a hazard.
(B) The construction of large, impenetrable

NODIA

methods are crucial for Community Based Disaster Risk Reduction (CBDRR).
Reason (R) : These methods empower local communities by incorporating their indigenous knowledge and perceptions of risk.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

16. Consider the following statements:
Statement I : The role of civil society is often to fill gaps left by governmental efforts in disaster management.
Statement II : Volunteer organizations are primarily involved in long-term policy formulation at the national level.
Which of the above statement(s) is/are correct?
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

17. A village community collectively decides to map out areas prone to flooding, identify safe evacuation routes, and list the most vulnerable households. This activity is a prime example of:
(A) National policy-making.
(B) Participatory risk assessment.
(C) Post-disaster damage assessment.
(D) Financial resource mobilization.

18. Which of the following is NOT a strategy for risk reduction in communities?
(A) Encouraging dependency on external aid for all needs.
(B) Promoting awareness and education on disaster risks.
(C) Implementing structural mitigation measures like retrofitting buildings.
(D) Developing and practicing community-level early warning systems.

19. Identify the correct pair related to community action for DRR.
(A) Mitigation - Distributing relief materials after a flood.
(B) Response - Constructing a cyclone shelter.
(C) Preparedness - Forming a village disaster management committee.
(D) Recovery - Conducting a mock drill for evacuation.

20. Consider the following activities related to community action for DRR:
I. Conducting mock drills.
II. Identifying safe shelters.
III. Creating a community contingency fund.
IV. Preparing family disaster kits.
V. Ignoring early warnings from authorities.
Which of the above are considered positive community actions for preparedness?
(A) I, II, III and V
(B) I, II, III and IV
(C) II, III, IV and V
(D) I, III, IV and V

21. In the context of Community Risk Management, what does 'Community Assets' primarily refer to?
(A) Only the accumulated financial savings of the community members.
(B) The infrastructure owned exclusively by the government within a zone.
(C) Collective resources and strengths used to reduce community risk.
(D) The amount of international aid a community is eligible to receive.

22. What is the main objective of community risk mapping?
(A) Creating visually complex maps for academic and research purposes.
(B) Representing hazards and capacities for community planning.
(C) Determining the exact financial value of specific community assets.
(D) Replacing satellite imagery and official government digital maps.

23. The concept of 'Living with Risk' in disaster management implies:
(A) Accepting disasters fatalistically without taking any protective action.

Click Here to Buy book on Amazon

involves the careful design and implementation of interventions to meet children's specific needs and rights. While both concepts are related, inclusivity emphasizes the voice of children, whereas sensitivity focuses on the appropriateness and accessibility of disaster services.

265. (A) The need for safe spaces for play and education within temporary shelters.
Children have distinct requirements that differ from those of adults at every stage of a disaster. In temporary shelters, providing safe spaces for play and continuing education is a vital need unique to their developmental and psychosocial well-being. Such measures help children process trauma and resume a sense of normalcy, demonstrating why tailored interventions are necessary throughout the disaster cycle.

266. (B) A combination of physical frailty, health conditions, and social isolation.
The vulnerability of the elderly in disaster situations is rooted in a multifaceted combination of physical frailty, chronic health conditions, and sensory impairments. Additionally, social isolation can severely limit their ability to receive warnings or evacuate without assistance. These overlapping factors make it difficult for older adults to navigate chaotic environments, necessitating specialized planning and support to ensure their safety.

267. (B) ensuring temporary shelters have accessible toilets and access to essential medications.
Elderly-sensitive disaster management involves designing interventions tailored to the specific requirements of older people. This includes ensuring that temporary shelters are physically accessible, providing appropriate bedding, and maintaining access to essential medications and specialized dietary needs. By addressing these specific physical and health-related requirements, disaster response efforts can uphold the dignity and well-being of the elderly during stressful recovery periods.

268. (A) shaped by life experiences but potentially hindered by loss of support networks.
Older individuals possess coping strategies developed through a lifetime of experience with various challenges. However, these strategies can be severely hampered during disasters by the loss of social support networks or physical limitations. Understanding this balance between experience and environmental barriers is crucial for disaster management, as it allows for the creation of support systems that bolster their inherent resilience.

269. (C) To ensure their specific needs and perspectives are part of the planning process.
Elderly-inclusive disaster management ensures that the voices and specific needs of older people are incorporated into the planning and decision-making processes. This inclusion is necessary because older adults possess unique insights into community hazards and have specific requirements that might otherwise be overlooked. By involving them, disaster plans become more comprehensive and effective in safeguarding this growing demographic group.

270. (D) The chaotic evacuation and response phase.
The chaotic nature of the immediate response and evacuation phase poses a significant risk to the elderly. During these times, individuals with limited mobility or sensory impairments may be overlooked by responders or struggle to follow rapid instructions. Ensuring that evacuation protocols include specific provisions for assisting older adults is essential to prevent casualties and ensure that no one is left behind.

271. (C) The interaction between a person's physical features and societal barriers.
Disability is understood as a complex phenomenon resulting from the interaction between an individual's physical or mental features and the societal environment. It is not merely a medical impairment but a reflection of how barriers in society—such as inaccessible infrastructure or information—limit participation. This perspective shifts the focus toward creating inclusive environments that accommodate the diverse needs of individuals.

NODIA

272. (B) Using sign language interpreters and Braille for IEC materials.
A core component of disability-inclusive disaster risk reduction is the use of accessible communication formats. Utilizing sign language interpreters, Braille, and other inclusive tools for information, education, and communication (IEC) ensures that vital safety information

walls around a community.
(C) The complete elimination of all possible risks.
(D) The total financial independence of a community from outside help.

32. 'Disaster Literacy of Communities' refers to:
(A) The ability of community members to read and write academic papers on disasters.
(B) A basic understanding of disaster risks and the knowledge of what to do before, during, and after a disaster.
(C) The number of schools in a community that have been retrofitted.
(D) The community's collective memory of past disasters only.

33. Which of the following is NOT a component of 'Social Wealth' that can contribute to community resilience?
(A) Strong social networks and kinship ties.
(B) High levels of internal conflict and distrust.
(C) Presence of local leadership and community organizations.
(D) A shared sense of identity and cooperation.

34. A community identifies its school building as a potential evacuation shelter. In a participatory risk mapping exercise, this school building would be classified as a:
(A) Capacity or Asset
(B) Hazard
(C) Vulnerability
(D) Risk

35. Match List I with List II and select the correct code:
List I: (Concept)
P. Social Justice in DM
Q. Public Sphere
R. Resilience
S. Disaster Literacy
List II: (Description)
1. The ability to bounce back from a disaster.
2. Understanding risks and safety measures.
3. Arena for public debate and opinion formation.
4. Ensuring equitable protection and aid for vulnerable groups.
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-1, S-2
(C) P-2, Q-1, R-4, S-3
(D) P-4, Q-1, R-2, S-3

36. Consider the following statements:
Statement I : The Sendai Framework for DRR is a global agreement that emphasizes a shift from post-disaster response to pre-disaster risk reduction.
Statement II : The framework has seven global targets and four priorities for action.
Which of the above statement(s) is/are correct?
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

37. The process of resolving disputes over resource allocation during the recovery phase by involving community leaders, government officials, and affected families in a joint meeting is an example of:
(A) Media advocacy
(B) Imposing a unilateral decision
(C) Conflict resolution through collaboration
(D) Ignoring the conflict

38. Which statement best describes the role of 'Public Voices' in disaster risk management?
(A) They are irrelevant as experts should make all decisions.
(B) They are crucial for ensuring accountability and shaping responsive disaster management policies.
(C) They should only be heard after a disaster has occurred.
(D) They represent the official position of the government.

39. A key challenge to achieving social justice in disaster recovery is:
(A) The lack of any international standards for disaster recovery.
(B) The refusal of communities to accept any form of external aid.
(C) The over-emphasis on protecting environmental resources over human lives.
(D) The tendency for recovery resources to be

Downloaded from www.pdf.tube

57. All of the following are examples of community assets EXCEPT:
(A) A strong network of local volunteers.
(B) Indigenous knowledge about coping with local hazards.
(C) A high prevalence of social conflict and division.
(D) A well-maintained community hall designated as a shelter.

58. The idea of a 'public sphere' in disaster management promotes:
(A) Open and inclusive discussion and debate on disaster-related issues.
(B) Closed-door meetings where only officials make decisions.
(C) The dissemination of government propaganda.
(D) The exclusion of community voices from planning processes.

59. A Urban Local Body (ULB) official is tasked with reducing urban flood risk. Which of the following actions demonstrates the most appropriate application of their role?
(A) Requesting the national government to declare a flood emergency.
(B) Leading a media campaign to blame neighboring towns.
(C) Distributing free umbrellas to all citizens.
(D) Enforcing regulations against construction on natural drainage channels and ensuring their regular de-silting.

60. Match List I with List II and select the correct code:
List I: (DRR Activity)
P. Enforcing building by-laws in a city
Q. Mobilizing volunteers for an awareness campaign
R. Providing immediate first aid using local knowledge
S. Broadcasting an early warning to a wide audience
List II: (Relevant Institution)
1. Community
2. NGO
3. Media
4. Urban Local Body (ULB)
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-2, S-1
(C) P-4, Q-2, R-1, S-3
(D) P-2, Q-1, R-4, S-3

NODIA

61. What is the fundamental principle behind "Conflict Resolution through Collaboration and Consensus"?
(A) Imposing the solution favored by the majority, regardless of minority concerns.
(B) Allowing a neutral third party to make a binding decision.
(C) Seeking a 'win-win' outcome through shared understanding and negotiation.
(D) Avoiding the conflict by not discussing contentious issues.

62. Identifying households headed by single women, elderly individuals, or persons with disabilities as requiring special assistance during an evacuation is a direct consideration of:
(A) Media advocacy.
(B) Conflict resolution.
(C) Financial auditing.
(D) Social justice challenges.

63. Consider the following statements:
Statement I : 'Living with Risk' implies that communities should not invest in any safety measures.
Statement II : 'Living with Risk' is about acknowledging and actively managing unavoidable residual risk.
Which of the above statement(s) is/are correct?
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is incorrect, but Statement II is correct.
(D) Statement I is correct, but Statement II is incorrect.

64. Which of the following is the best example of a community action for mitigation?
(A) Participating in a search and rescue operation.
(B) Retrofitting houses to make them earthquake-resistant.
(C) Receiving relief supplies from a helicopter.
(D) Clearing debris after a landslide.

(C) Highly technical and inaccessible to laypersons.
(D) A top-down process with no community input.

49. Consider the following Cause and Effect statements:
Cause: A community lacks disaster literacy and does not understand tsunami warning signs.
Effect: The community suffers high casualties during a tsunami event despite an official warning being issued.
Which of the following is true regarding the relationship between the Cause and the Effect?
(A) The Cause and Effect are unrelated.
(B) The Effect is a direct consequence of the Cause.
(C) The Cause is a consequence of the Effect.
(D) Both Cause and Effect are positive outcomes.

50. What is a "Citizen's Forum" in the context of Disaster Risk Reduction (DRR)?
(A) A public platform for dialogue and participation in governance and decision-making.
(B) A formal court of law for disaster-related crimes.
(C) A government-appointed committee of experts.
(D) A private club for disaster survivors.

51. The primary responsibility of a Panchayati Raj Institution (PRI) during the disaster response phase is to:
(A) Formulate international aid appeals.
(B) Conduct scientific research on the disaster's cause.
(C) Coordinate immediate relief and rescue with local resources.
(D) Revise national building codes.

52. Which statement accurately distinguishes the role of an NGO from a government body like a PRI in disaster management?
(A) NGOs have legal authority to enforce laws, whereas PRIs do not.
(B) NGOs focus only on long-term reconstruction, while PRIs focus only on immediate response.
(C) PRIs are funded by international donors, while NGOs are funded by government taxes.
(D) PRIs are formal governance structures, while NGOs are voluntary organizations with supplementary and advocacy roles.

53. An activity where community members draw maps of their village, showing houses, rivers, high-ground, and vulnerable populations, is called:
(A) Geographic Information System (GIS) mapping.
(B) Remote sensing analysis.
(C) Participatory community risk mapping.
(D) Cadastral surveying.

54. The Sendai Framework's emphasis on an "all-of-society" approach best aligns with which concept?
(A) Top-down disaster management policies.
(B) Inclusion of communities, NGOs, and the private sector.
(C) Response-centric disaster management models.
(D) A focus primarily on national government action.

55. Consider the following statements about building resilience:
I. Resilience is only about the strength of physical infrastructure.
II. Social cohesion and strong local institutions enhance community resilience.
III. Economic diversification can improve a community's ability to recover.
IV. Resilience means a community will be completely unaffected by any disaster.
Which of the above statement(s) is/are correct?
(A) I and IV
(B) II and III
(C) I and II
(D) III and IV

56. When media outlets run sustained campaigns on the importance of having a family disaster kit, they are performing a role in:
(A) Media advocacy for preparedness.
(B) Post-disaster needs assessment.
(C) Conflict resolution.
(D) Legal enforcement.

Click Here to Buy book on Amazon

from an NGO or government agency, is a core tenet of:
(A) Top-down disaster management.
(B) A command-and-control response system.
(C) Community Based Disaster Risk Reduction (CBDRR).
(D) International disaster diplomacy.

74. Which of these is NOT a role of a PRI in disaster preparedness?
(A) Conducting diplomatic negotiations with other countries for aid.
(B) Identifying vulnerable groups within the panchayat.
(C) Maintaining a list of local resources (doctors, vehicles, etc.).
(D) Spreading awareness and disseminating warnings.

75. Arrange the following disaster management phases in their typical chronological order of occurrence:
I. Recovery
II. Response
III. Mitigation
IV. Preparedness
(A) III, IV, II, I
(B) IV, III, II, I
(C) II, I, III, IV
(D) III, II, IV, I

76. The main advantage of using participatory risk assessment methods like community mapping is that they:
(A) Are more expensive than satellite-based methods.
(B) Capture local perspectives and knowledge that technical surveys might miss.
(C) Can be completed without any external technical support.
(D) Provide legally binding land ownership documents.

77. Which statement best defines a 'culture of prevention' in the context of DRR?
(A) A society that reacts effectively after a disaster strikes.
(B) A society that relies solely on insurance to cover losses.
(C) A society that prioritizes taking proactive steps to avoid or reduce disaster impacts.
(D) A society that has documented all its past disasters.

78. A key role for NGOs in the recovery phase is:
(A) Taking over the local government's functions.
(B) Declaring the official end of the emergency period.
(C) Conducting the primary damage assessment for the government.
(D) Focusing on psychosocial support and livelihood restoration.

79. Consider the following statements:
Statement I : Community risk mapping is done exclusively by trained cartographers.
Statement II : Community risk mapping is a participatory tool that helps villagers visualize their own risks and resources.
Which of the above statement(s) is/are correct?
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is incorrect, but Statement II is correct.
(D) Statement I is correct, but Statement II is incorrect.

80. Consider the following as strategies for risk reduction in communities:
I. Diversification of livelihoods.
II. Strict enforcement of land use zoning.
III. Public awareness and education campaigns.
IV. Construction in high-risk zones without precautions.
Which of the above are valid risk reduction strategies?
(A) I, II and IV
(B) I, II and III
(C) II, III and IV
(D) I, III and IV

81. The Sendai Framework for DRR succeeded which previous international agreement on disaster risk reduction?
(A) The Rio Declaration on Environment and Development.
(B) The Hyogo Framework for Action.
(C) The Kyoto Protocol.
(D) The Paris Agreement on Climate Change.

NODIA

65. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The inclusion of Panchayati Raj Institutions (PRIs) is vital for the success of disaster management in rural India.
Reason (R) : PRIs, as institutions of local self-government, have the mandate and local presence to implement DRR plans at the grassroots level.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

66. What is the primary role of volunteer organizations in DM?
(A) To supplement and support the efforts of government and communities.
(B) To enforce laws and regulations.
(C) To provide long-term financial loans for reconstruction.
(D) To take over the complete command and control of disaster operations.

67. The collective capacity of a community to withstand and recover from a disaster, based on its social, economic, and institutional resources, is known as:
(A) Disaster literacy
(B) Public voice
(C) Community resilience
(D) Risk mapping

68. Identify the incorrect statement.
(A) Sendai Framework - A global policy perspective for DRR.
(B) Risk Mapping - Visual tool for identifying hazards and vulnerabilities.
(C) Citizens Forum - Platform for public participation.
(D) Social Wealth - Community's financial assets in the bank.

69. Increasing a community's disaster literacy is a key strategy for:
(A) Documenting historical disaster events.
(B) Calculating the financial cost of a disaster.
(C) Building a culture of prevention and preparedness.
(D) Punishing those who do not comply with safety norms.

70. Consider the following statements regarding the role of media in disaster management:
I. Disseminating warnings and safety information.
II. Creating panic through unverified rumors.
III. Highlighting the plight of victims to mobilize support.
IV. Acting as a watchdog to ensure government accountability.
V. Formulating the national disaster management policy itself.
Which of the above represent constructive roles of the media?
(A) I, III, IV and V
(B) II, III and V
(C) I, III and IV
(D) I, II, III and IV

NODIA

71. The 'public sphere' created by media and citizen forums is important for disaster management because it:
(A) Guarantees that all decisions will be unanimous.
(B) Is the official channel for commanding response teams.
(C) Replaces the need for formal government institutions.
(D) Allows for democratic deliberation and holds power structures accountable.

72. One of the major social justice challenges in post-disaster scenarios is the risk of 'secondary victimization'. What does this refer to?
(A) The trauma and harm caused by a poorly managed, insensitive, or discriminatory relief and recovery process.
(B) The physical impact of the disaster event itself.
(C) The occurrence of a second, unrelated disaster event.
(D) The legal prosecution of victims for non-compliance.

73. The practice of a community developing its own disaster management plan, with facilitation

captured by the more powerful and well-connected sections of the community.

40. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Media advocacy plays a critical role in effective disaster management.
Reason (R) : The media can influence public opinion, hold authorities accountable, and disseminate vital information for preparedness and response.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

41. Which of the following is a primary objective of increasing a community's disaster literacy?
(A) To enable every citizen to become a professional seismologist.
(B) To increase the sales of disaster-related movies and books.
(C) To reduce fear by empowering individuals with knowledge and skills.
(D) To criticize government efforts without offering solutions.

42. In a community risk management context, what is 'Social Wealth'?
(A) The intangible social resources like trust, networks, and cooperation that enhance resilience.
(B) The total monetary value of all property in the community.
(C) The amount of government subsidy provided to the community.
(D) The number of wealthy individuals residing in the community.

43. An Urban Local Body (ULB) passing a resolution to regularly clean storm water drains before the monsoon season is an example of which type of measure?
(A) Disaster response
(B) Disaster recovery
(C) Post-disaster damage assessment
(D) Disaster mitigation

44. Identify the incorrect statement regarding the role of a community as a first responder.
(A) Community members are often the first to arrive at the scene of a disaster.
(B) Their effectiveness is hampered by a complete lack of local knowledge.
(C) They can provide immediate search, rescue, and first aid.
(D) Their actions in the initial hours can save many lives.

45. Consider the following as potential stakeholders in disaster management for a coastal village:
I. Fishermen's cooperative
II. Local Panchayat
III. A national-level NGO working on health
IV. The State Disaster Management Authority
V. A private sector hotel owner on the coast
Which of the above can be considered stakeholders?
(A) I, II and IV only
(B) II and IV only
(C) I, II, III and V only
(D) All I, II, III, IV and V

46. Which of the following best exemplifies 'People's participation' in the mitigation phase?
(A) A community waiting for the army to arrive for rescue after a flood.
(B) A community demanding compensation after a disaster.
(C) A community watching a disaster documentary on television.
(D) A community collectively planting mangroves along a coastline to reduce storm surge impact.

47. The role of civil society organizations in creating a 'culture of safety' primarily involves:
(A) Advocacy, awareness campaigns, and training programs.
(B) Law enforcement and issuing penalties.
(C) Constructing large-scale infrastructure projects.
(D) Managing the national budget for disasters.

48. A key feature of 'participatory risk assessment methods' is that they are:
(A) Conducted exclusively by foreign experts.
(B) A collaborative process involving both local communities and technical experts.

Downloaded from www.pdf.tube

82. In the context of disaster management, what does "consensus" in decision-making imply?
(A) A general agreement that all stakeholders can support.
(B) A decision reached by voting where the majority wins.
(C) A decision made unilaterally by the leader.
(D) A decision postponed until every single person agrees.

83. 'Public voices' being ignored in the planning of a new dam, leading to the displacement of vulnerable communities without proper resettlement, highlights a failure in ensuring:
(A) The technical specifications of the dam.
(B) The financial viability of the project.
(C) Social justice and participatory governance.
(D) The speed of project completion.

84. A local radio station that regularly broadcasts weather updates and interviews with disaster management officials is contributing to:
(A) The creation of social conflict.
(B) The formal legal process of disaster declaration.
(C) The physical reconstruction of infrastructure.
(D) Community resilience and disaster literacy.

85. Match List I with List II and select the correct code:
List I: (Term)
P. Community Asset
Q. Social Justice Challenge
R. Media Advocacy
S. Living with Risk
List II: (Example)
1. A newspaper editorial demanding better early warning systems.
2. A farmer planting salt-tolerant crops in a coastal area.
3. A trained team of local first-aid volunteers.
4. Unequal distribution of relief supplies.
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-1, S-2
(C) P-2, Q-1, R-4, S-3
(D) P-3, Q-1, R-2, S-4

86. The ability of a community to function, even at a reduced level, during and after a disaster is a key component of its:
(A) Vulnerability
(B) Resilience
(C) Hazard exposure
(D) Risk perception

87. Which of the following is NOT a benefit of people's participation in DRR?
(A) It incorporates indigenous knowledge into planning.
(B) It builds local capacity and skills.
(C) It promotes sustainability and ownership of the initiatives.
(D) It increases the cost and complexity of all projects, making them unfeasible.

NODIA

88. An NGO training a group of women to become masons for building earthquake-resistant houses is an example of their role in:
(A) Capacity building and recovery.
(B) Immediate rescue.
(C) Policy formulation at the UN level.
(D) Issuing official disaster warnings.

89. A Village Disaster Management Committee (VDMC) is a key institutional mechanism at the local level, typically promoted by:
(A) International Courts.
(B) The National Security Council.
(C) Panchayati Raj Institutions.
(D) Corporate bodies.

90. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Social justice is a critical consideration in disaster management.
Reason (R) : Disasters often exacerbate existing inequalities, making the poor and marginalized even more vulnerable.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

91. The primary role of civil society organizations in disaster management is best described as:
(A) Coercive
(B) Legislative

people, and economic losses.
(D) The sovereignty of nations in managing their own disasters.

110. Match List I with List II and select the correct code:
List I: (Phase of DM)
P. Mitigation
Q. Preparedness
R. Response
S. Recovery
List II: (Key Community Activity)
1. Conducting mock evacuation drills.
2. Undertaking immediate search and rescue.
3. Participating in livelihood restoration programs.
4. Planting trees on slopes to prevent landslides.
(A) P-1, Q-4, R-2, S-3
(B) P-4, Q-1, R-3, S-2
(C) P-4, Q-1, R-2, S-3
(D) P-2, Q-3, R-1, S-4

111. When different community groups have conflicting priorities for a risk reduction project, the most constructive first step is to:
(A) Facilitate a collaborative dialogue to reach a consensus.
(B) Implement the plan favored by the most vocal community group.
(C) Discontinue the project due to a lack of initial agreement.
(D) Request an external donor to decide which priority is best.

112. The term 'public sphere' in disaster governance refers to an arena where:
(A) Public meetings are held, but decisions are made elsewhere.
(B) Public opinion can be formed and expressed, influencing policy and action.
(C) Only government officials are allowed to speak.
(D) Private conversations about disasters take place.

113. A social justice approach to disaster management would prioritize:
(A) The needs of the economically powerful.
(B) The special needs and vulnerabilities of marginalized groups.
(C) An equal, but not necessarily equitable, distribution of aid.
(D) The rapid reconstruction of commercial properties.

114. A newspaper publishing an investigative report on the poor quality of materials used in a cyclone shelter is an example of:
(A) Media advocacy for accountability.
(B) Creating unnecessary panic.
(C) Hindering the government's work.
(D) A social justice challenge.

115. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Community resilience is not just about having strong infrastructure, but also strong social fabric.
Reason (R) : 'Social wealth', such as community networks, trust, and cooperation, are critical for collective action and mutual support during and after a disaster.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

116. Improving disaster literacy within a community directly contributes to:
(A) An increase in property prices.
(B) The elimination of all natural hazards.
(C) The community's ability to predict the exact time of a disaster.
(D) A reduction in vulnerability and an increase in capacity.

117. Which local institution is statutorily empowered to prepare a Disaster Management Plan for its area of jurisdiction in rural India?
(A) Non-Governmental Organizations (NGOs)
(B) Local Police Station
(C) Panchayati Raj Institutions (PRIs)
(D) Primary Health Centre

118. The most significant role of civil society and volunteer organizations lies in their ability to:
(A) Enforce legal penalties.

Click Here to Buy book on Amazon

incorrect.
(D) Statement I is incorrect, but Statement II is correct.

101. The creation of a culture of prevention is a long-term goal that primarily aims to:
(A) Ensure all citizens are trained as professional rescuers.
(B) Blame victims for the losses they suffer.
(C) Make disaster management a part of everyday life and decision-making.
(D) Increase the budget for post-disaster response.

102. NGOs often play a vital 'bridging' role in disaster management. What does this mean?
(A) They construct physical bridges over rivers after floods.
(B) They connect the affected community with government agencies and other resource providers.
(C) They bridge the gap between different political parties.
(D) They provide a bridge loan to the government.

103. The term 'stakeholders' in community-based DM is inclusive of:
(A) Only the elected representatives.
(B) Only the members of the affected community.
(C) Only the international donor agencies.
(D) All parties who have an interest in or are affected by the disaster and the mitigation efforts.

104. For a PRI, which of the following is a key responsibility during the recovery and reconstruction phase?
(A) Monitoring the proper and equitable implementation of housing reconstruction schemes.
(B) Declaring war on a neighboring country.
(C) Directly commanding the army and air force.
(D) Formulating national economic policy.

105. Consider the following statements about community participation:
I. It is most effective when it is voluntary and self-mobilized.
II. It can be fostered and facilitated by external agencies like NGOs.
III. It is only relevant during the response phase.
IV. It helps in making DRR plans more context-specific.
Which of the above statement(s) is/are correct?
(A) I, II and IV
(B) I, II and III
(C) II, III and IV
(D) I, III and IV

106. What is the ultimate goal of achieving 'Disaster Literacy' within a community?
(A) To create a risk-aware and prepared citizenry that can take appropriate safety actions.
(B) To make citizens overly anxious about disasters.
(C) To ensure everyone can pass a written exam on disaster terminology.
(D) To enable citizens to take over the role of scientists.

107. Which of the following is the best example of 'social wealth' being utilized in a disaster?
(A) A wealthy individual donating a large sum of money to a charity.
(B) The government distributing compensation cheques.
(C) An insurance company paying out claims.
(D) A community kitchen run by local volunteers to feed survivors.

108. The concept of 'Living with Risk' acknowledges that:
(A) Zero risk is an achievable goal for all communities.
(B) While all risks cannot be eliminated, communities can learn to manage and reduce them.
(C) It is impossible to do anything about disasters.
(D) The only solution is to relocate all populations from hazard-prone areas.

109. A primary goal of the Sendai Framework is to achieve a substantial reduction in:
(A) The number of disaster management conferences held annually.
(B) The number of NGOs working in the field of disaster management.
(C) Global disaster mortality, number of affected

NODIA

(C) Judicial
(D) Complementary and participatory

92. Which of the following activities falls under the 'preparedness' role of a community?
(A) Constructing a retaining wall on a landslide-prone slope.
(B) Identifying evacuation routes and conducting drills.
(C) Rebuilding damaged houses after an earthquake.
(D) Clearing debris from roads immediately after a cyclone.

93. The concept of 'social wealth' contributing to resilience is based on the idea that:
(A) Rich people are less affected by disasters.
(B) A society's wealth is measured by its gold reserves.
(C) Strong social bonds and trust enable communities to cooperate and support each other during a crisis.
(D) Wealthy communities can afford better technology.

94. What is the most significant contribution of 'public voices' and a vibrant 'public sphere' to disaster risk governance?
(A) They ensure that all decisions are made slowly.
(B) They replace the need for technical expertise.
(C) They focus exclusively on criticizing the government.
(D) They enhance transparency, accountability, and inclusivity.

95. Consider the following statements regarding the Sendai Framework for DRR:
I. It is a non-binding agreement.
II. It was adopted in 2015.
III. It emphasizes the need to manage risk rather than just manage disasters.
IV. It replaced the Hyogo Framework for Action.
V. It has a primary focus on military intervention in disasters.
Which of the above statement(s) is/are correct?
(A) I, II, III, and V
(B) II, III, IV, and V
(C) I, II, III, and IV
(D) I, III, and V

96. Media's role in broadcasting a documentary about a community that successfully implemented a local flood warning system is an example of:
(A) Spreading misinformation.
(B) Media advocacy by showcasing best practices.
(C) Sensationalist reporting.
(D) Hindering recovery efforts.

97. An Urban Local Body (ULB) is best positioned to reduce disaster risk by:
(A) Managing foreign affairs.
(B) Integrating DRR measures into urban planning and development.
(C) Commanding the national armed forces.
(D) Printing currency to fund relief efforts.

98. The most crucial role of the community in the immediate aftermath of a disaster is:
(A) Conducting immediate and spontaneous search, rescue, and first aid.
(B) Waiting for the Prime Minister to visit the area.
(C) Documenting losses for insurance claims.
(D) Analyzing the meteorological cause of the disaster.

99. Which of the following is an example of a participatory risk assessment method?
(A) Satellite-based flood inundation modeling.
(B) A laboratory-based seismic soil analysis.
(C) A community transect walk to identify hazards and safe areas.
(D) A national-level economic loss estimation.

100. Consider the following statements:
Statement I : Building resilience is a one-time activity that ends with the construction of a physical structure.
Statement II : Building resilience is a continuous process that involves strengthening social, economic, and institutional capacities.
Which of the above statement(s) is/are correct?
(A) Both Statement I and Statement II are correct.
(B) Statement I is correct, but Statement II is incorrect.
(C) Both Statement I and Statement II are

Downloaded from www.pdf.tube

(B) Mobilize communities and advocate for the vulnerable.
(C) Replace the formal disaster management structure.
(D) Finance the entire national disaster management budget.

119. A participatory risk assessment exercise reveals that the only well in a village is located in a flood-prone area. This finding primarily highlights a:
(A) Community capacity
(B) Community hazard
(C) Community mitigation measure
(D) Community vulnerability

120. Consider the following characteristics of Community Based Disaster Risk Reduction (CBDRR):
I. It is a top-down approach.
II. It recognizes communities as active participants.
III. It utilizes local and indigenous knowledge.
IV. It aims to build community resilience.
V. It is exclusively focused on post-disaster relief.
Which of the above statements are correct?
(A) I, III, and V
(B) II, III, and IV
(C) I, II, and V
(D) II, IV, and V

121. The development of a "culture of safety" is primarily a:
(A) Technological process
(B) Legal enforcement process
(C) Social and behavioral change process
(D) Financial investment process

122. Which of the following best illustrates 'conflict resolution through consensus' in a post-disaster scenario?
(A) Groups agreeing on a fair system for resource distribution.
(B) The village headman distributing relief to his own relatives.
(C) The government imposing a plan without community consultation.
(D) Competing local groups fighting over available relief supplies.

123. The 'public sphere' is crucial for addressing social justice challenges in DM because it:
(A) Is a space where only the elite can participate in decision making.
(B) A guarantee that everyone will receive an identical amount of aid.
(C) A government body that is run and controlled by the state.
(D) Allows marginalized groups to voice their specific needs and contest discriminatory practices.

NODIA

124. A TV channel repeatedly showing animations of 'drop, cover, hold on' during an earthquake awareness week is an act of:
(A) Poor journalism
(B) Media advocacy for disaster preparedness
(C) Creating a social justice challenge
(D) Community risk mapping

125. Arrange the following Disaster Risk Reduction (DRR) frameworks/events in chronological order of their inception:
I. Sendai Framework for DRR
II. International Decade for Natural Disaster Reduction (IDNDR)
III. Yokohama Strategy and Plan of Action
IV. Hyogo Framework for Action
(A) II, III, IV, I
(B) I, IV, III, II
(C) III, II, I, IV
(D) II, IV, I, III

126. A community's ability to "bounce back better" after a disaster, by not just restoring but also improving its conditions, is a hallmark of:
(A) High vulnerability
(B) High hazard exposure
(C) High disaster illiteracy
(D) High resilience

127. Which of the following is the most fundamental role of the community itself in CBDRR?
(A) To be the primary owner and actor in its own safety.
(B) To be a passive recipient of aid and instructions.
(C) To delegate all responsibility to the local government.
(D) To focus only on economic activities and ignore safety.

(A) A social justice challenge.
(B) A functioning public sphere.
(C) A community risk map.
(D) A response phase activity.

183. Ensuring that temporary shelters have separate and safe sanitation facilities for women is a critical measure to address:
(A) A media advocacy point.
(B) A conflict resolution technique.
(C) A community literacy program.
(D) A social justice and gender-specific challenge.

184. The ability of a community system to absorb and recover from the impacts of a hazard, while positively adapting and transforming its structures, is known as:
(A) Resilience
(B) Vulnerability
(C) Exposure
(D) Capacity

185. Match List I with List II and select the correct code:
List I: (Local Institution)
P. Gram Sabha
Q. City Municipal Corporation
R. Local NGO
S. Community Youth Club
List II: (Specific DM Function)
1. Implementing livelihood support projects for victims.
2. Approving the village disaster management plan.
3. Organizing volunteer teams for search and rescue.
4. Enforcing drainage and sanitation by-laws.
(A) P-1, Q-3, R-2, S-4
(B) P-2, Q-4, R-1, S-3
(C) P-4, Q-2, R-3, S-1
(D) P-2, Q-1, R-4, S-3

186. Enhancing 'disaster literacy' among community members is a form of:
(A) Non-structural mitigation and preparedness.
(B) Structural mitigation.
(C) Financial risk transfer.
(D) Post-disaster recovery.

187. The first and most immediate responders to any disaster are almost always:
(A) The national government.
(B) International aid workers.
(C) The military.
(D) The affected community itself.

188. Identify the incorrect statement about the roles of PRIs/ULBs.
(A) They are responsible for preparing local disaster management plans.
(B) Their primary function is to conduct foreign policy.
(C) They play a crucial role in land-use regulation and enforcement.
(D) They help in identifying and assisting vulnerable populations.

189. Which of the following is NOT a typical role of an NGO in disaster management?
(A) Advocacy for the rights of the affected.
(B) Capacity building of community groups.
(C) Passing and gazetting new national laws.
(D) Providing specialized technical support (e.g., psychosocial care).

190. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The Sendai Framework for DRR emphasizes the importance of investing in disaster risk reduction for resilience.
Reason (R) : Structural and non-structural measures for DRR, such as retrofitting schools and public awareness campaigns, are critical investments that reduce future losses and enhance a community's ability to cope.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

191. The success of community-based disaster risk reduction heavily depends on:
(A) The level of people's participation.
(B) The amount of foreign aid received.
(C) The complexity of the technology used.
(D) The degree of top-down control.

Click Here to Buy book on Amazon

136. Which of the following represents a social justice challenge in the mitigation phase?
(A) Flood embankments being built to protect affluent neighborhoods while leaving poor settlements vulnerable.
(B) All houses in a village being retrofitted to be earthquake-resistant.
(C) A community-wide mock drill being conducted.
(D) An early warning being disseminated to all residents equally.

137. Building community resilience requires a holistic approach that strengthens:
(A) Only the economic aspects of a community.
(B) Only the physical infrastructure of a community.
(C) The social, economic, physical, and institutional dimensions of a community.
(D) Only the emergency response capacity of a community.

138. An effective strategy to increase disaster literacy is:
(A) Including disaster management topics in school curricula.
(B) Restricting access to information about hazards.
(C) Assuming people will learn from experience alone.
(D) Focusing only on academic, high-level research.

139. Consider the following Cause and Effect statements:
Cause: An Urban Local Body fails to enforce laws against building on floodplains.
Effect: During heavy rains, the new constructions in the floodplain suffer severe damage and loss of life.
Which of the following is true regarding the relationship between the Cause and the Effect?
(A) The Cause and Effect are unrelated.
(B) The Cause is a direct contributor to the Effect.
(C) The Effect is the cause of the Cause.
(D) Both are positive developmental outcomes.

140. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : People's participation is a cornerstone of Community Based Disaster Risk Reduction (CBDRR).
Reason (R) : Without the active involvement of the community, DRR plans may lack local context, ownership, and sustainability.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

141. The role of a Gram Panchayat in the pre-disaster phase includes all of the following EXCEPT:
(A) Preparing the Village Disaster Management Plan.
(B) Spreading awareness about risks and preparedness measures.
(C) Identifying beneficiaries for relief distribution after a disaster.
(D) Training and equipping a village volunteer force.

142. A group of volunteers from a local youth club organizing a blood donation camp in anticipation of a cyclonic storm is an example of:
(A) Mitigation
(B) Recovery
(C) Response
(D) Preparedness

143. The "culture of prevention" is best promoted through:
(A) Continuous education, awareness, and integration into daily life.
(B) A one-time financial grant.
(C) Strict punishment after a disaster.
(D) Relying on international aid.

144. In a participatory risk assessment, a 'transect walk' involves:
(A) Sitting in a room and looking at satellite maps.
(B) Community members walking through their village with facilitators to observe, discuss, and map risks and resources.
(C) Interviewing only the village headman.
(D) A detailed geological survey conducted by

Downloaded from www.pdf.tube

scientists.

145. Consider the following as components of building community resilience:
I. Strong and diversified local economy.
II. Good governance and effective local institutions (PRIs/ULBs).
III. Well-maintained protective infrastructure.
IV. Social cohesion and strong community networks.
V. Complete dependence on external support.
Which of the above are positive components of resilience?
(A) I, II, III, and V
(B) I, II, III, and IV
(C) II, III, IV, and V
(D) I, III, IV, and V

146. 'Social Wealth' or 'Social Capital' is considered a crucial community asset because:
(A) It facilitates cooperation, collective action, and mutual help, which are vital in a crisis.
(B) It can be directly converted into cash.
(C) It is a measure of the number of government schemes in an area.
(D) It guarantees that a disaster will not happen.

147. The "Sendai Framework for DRR" calls for a shift from managing disasters to:
(A) Managing only the recovery phase.
(B) Managing international relations.
(C) Managing disaster risk.
(D) Managing media reporting.

148. A consensus-based decision on the location of a new community shelter is one that:
(A) Is forced upon the community by the highest authority.
(B) Is decided by a simple majority vote, ignoring the minority's concerns.
(C) Is postponed indefinitely due to disagreement.
(D) Is acceptable to all key stakeholder groups, even if it is not their ideal choice.

149. The 'public sphere' can act as a check on power by:
(A) Making all government information secret.
(B) Banning all public discussion on sensitive topics.
(C) Allowing citizens and media to scrutinize government actions and demand accountability.
(D) Ensuring that only the government's perspective is heard.

150. Which of the following scenarios best illustrates a social justice challenge in disaster response?
(A) Executing a well-organized evacuation plan for the city.
(B) Aid distribution points being set up only in affluent areas.
(C) Common community kitchens serving food to all survivors.
(D) First responders providing care based on injury severity.

151. Which role of the media is most crucial for long-term risk reduction?
(A) Live reporting of a disaster event as it unfolds.
(B) Showing post-disaster entertainment programs.
(C) Broadcasting advertisements for commercial products.
(D) Conducting sustained advocacy and awareness campaigns on mitigation and preparedness.

NODIA

152. Building resilience is essentially about increasing a community's:
(A) Coping capacity
(B) Vulnerability
(C) Hazard level
(D) Rate of illiteracy

153. A community's understanding of local risks and its knowledge of what to do in an emergency is termed as its:
(A) Financial status
(B) Political affiliation
(C) Disaster literacy
(D) Social hierarchy

154. The most important responsibility of an Urban Local Body (ULB) like a Municipal Corporation in disaster management is:
(A) Ensuring disaster-resilient urban planning and service delivery.
(B) International diplomacy.
(C) Commanding the military response.
(D) Fiscal policy formulation for the nation.

155. Consider the following statements regarding the responsibilities of a community in disaster management:
I. To be the first responder in any emergency.
II. To participate in the preparation of the community disaster management plan.
III. To depend entirely on external help for its safety.
IV. To share its indigenous knowledge of hazards and coping mechanisms.
Which of the above statement(s) is/are correct?
(A) I, II and III
(B) II, III and IV
(C) I, II and IV
(D) I, III and IV

156. The primary purpose of people's participation in DRR is to:
(A) Reduce the workload of government officials.
(B) Make the process more inclusive, relevant, and sustainable.
(C) Fulfill a procedural formality.
(D) Shift the entire financial burden of DRR onto the community.

157. Civil society and volunteer organizations contribute to building a 'culture of safety' by:
(A) Enacting laws.
(B) Constructing dams and embankments.
(C) Changing mindsets and behaviors through awareness and training.
(D) Distributing salaries to government employees.

158. The process of community risk mapping is best described as:
(A) A technical exercise done on computers by experts.
(B) A method to finalize property boundaries.
(C) A way to calculate insurance premiums.
(D) A participatory method for a community to identify and analyze its own risks.

159. The Sendai Framework has how many global targets to be achieved by 2030?
(A) Seven
(B) Four
(C) Five
(D) Ten

160. Match List I with List II and select the correct code:
List I: (Sendai Priority)
P. Priority 1
Q. Priority 2
R. Priority 3
S. Priority 4
List II: (Action)
1. Investing in DRR for resilience.
2. Understanding disaster risk.
3. Enhancing disaster preparedness for effective response.
4. Strengthening disaster risk governance.
(A) P-1, Q-3, R-2, S-4
(B) P-2, Q-4, R-1, S-3
(C) P-2, Q-1, R-4, S-3
(D) P-3, Q-4, R-1, S-2

161. 'Living with Risk' is a paradigm that encourages:
(A) Ignoring risks.
(B) A proactive and adaptive approach to managing risks as part of life.
(C) Complete abandonment of all hazard-prone areas.
(D) A fatalistic and passive attitude.

162. Consider the following statements:
Statement I : Social justice in disaster management ensures that the needs of the most vulnerable are prioritized.
Statement II : A 'one-size-fits-all' approach to relief and recovery promotes social justice.
Which of the above statement(s) is/are correct?
(A) Both Statement I and Statement II are correct.
(B) Both Statement I and Statement II are incorrect.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

163. A Gram Pradhan (village head) notices that a private contractor is building a bridge using substandard materials. What is the most appropriate action for the Pradhan, reflecting their role in Disaster Risk Reduction (DRR)?
(A) Ignore the issue as it is a private project.
(B) Ask the contractor for a personal bribe to stay silent.
(C) Immediately report the issue to higher

Click Here to Buy book on Amazon

128. The responsibility for maintenance of community assets like cyclone shelters, created under a government scheme, often lies with the:
(A) United Nations
(B) Local PRI/ULB in collaboration with the community
(C) National Government exclusively
(D) The contractor who built it, in perpetuity

129. Consider the following statements:
Statement I : People's participation makes disaster management more democratic and effective.
Statement II : People's participation is often a hindrance because local people lack any useful knowledge.
Which of the above statement(s) is/are correct?
(A) Both Statement I and Statement II are correct.
(B) Statement I is correct, but Statement II is incorrect.
(C) Both Statement I and Statement II are incorrect.
(D) Statement I is incorrect, but Statement II is correct.

130. Consider the following, which can be part of a community risk map:
I. Location of hazards like landslide-prone slopes.
II. Identification of vulnerable households.
III. Location of resources like handpumps and safe shelters.
IV. Evacuation routes.
Which of the above are typically included in a community risk map?
(A) I and II only
(B) III and IV only
(C) I, II and III only
(D) I, II, III and IV

131. The term 'civil society' in the context of DRR is a broad term that includes:
(A) Formal government bodies and state-run administrative agencies.
(B) Private sector for-profit corporations and business entities.
(C) Civil groups, NGOs, and community-based organizations.
(D) National military services and local law enforcement forces.

NODIA

132. What is the most appropriate role for an NGO in a situation where government relief is not reaching a remote, marginalized community?
(A) To ignore the community as it is the government's responsibility.
(B) To launch a political campaign to overthrow the government.
(C) To take over the government's administrative functions in that area.
(D) To provide immediate supplementary relief and advocate to the government on behalf of the community.

133. The concept of 'mainstreaming' DRR, strongly advocated by the Sendai Framework, means:
(A) Creating a separate, isolated ministry for disaster management.
(B) Focusing DRR efforts only on mainstream, urban populations.
(C) Integrating risk reduction considerations into all sectors of development like health, education, and infrastructure.
(D) Making DRR a topic only for media discussion.

134. A fisherman's knowledge of sea conditions and informal warning signs is an example of what kind of community asset?
(A) Financial asset
(B) Indigenous knowledge
(C) Physical asset
(D) Political asset

135. Match List I with List II and select the correct code:
List I: (Stakeholder)
P. Community
Q. ULB
R. Media
S. NGO
List II: (Key Contribution to DRR)
1. Advocacy and capacity building
2. Urban planning and code enforcement
3. Public awareness and accountability
4. First response and local knowledge
(A) P-4, Q-2, S-1, R-3
(B) P-1, Q-2, S-3, R-4
(C) P-4, Q-3, S-2, R-1
(D) P-2, Q-4, S-1, R-3

(A) Top-down management
(B) People's participation
(C) Bureaucratic control
(D) Authoritarian rule

173. The role of volunteer organizations is most effective when it is:
(A) Conducted in isolation without any communication with other agencies.
(B) Focused only on fundraising.
(C) Coordinated with the efforts of the local government and community.
(D) Aimed at replacing the local administration.

174. Which of the following is an example of a structural mitigation measure that a community might participate in?
(A) Conducting a mock drill.
(B) Creating a family disaster kit.
(C) Listening to a disaster warning on the radio.
(D) Building a small, community-managed check-dam to control flash floods.

175. Arrange the typical sequence of actions in a participatory risk assessment at the community level:
I. Analyzing the collected data to prioritize risks.
II. Collecting information on hazards, vulnerabilities, and capacities.
III. Developing an action plan based on the findings.
IV. Orienting the community and forming a team.
(A) IV, II, I, III
(B) I, II, III, IV
(C) II, IV, I, III
(D) IV, I, II, III

176. Which of these best describes a 'culture of preparedness'?
(A) A culture where people believe disasters are acts of god and nothing can be done.
(B) A culture where individuals, families, and communities routinely take steps to be ready for a disaster.
(C) A culture that focuses only on celebrating past survival stories.
(D) A culture that invests all its resources in post-disaster response.

177. A key component of 'social wealth' is:
(A) The number of banks in a village.
(B) The level of mutual trust and reciprocity among community members.
(C) The total land value of the community.
(D) The amount of foreign remittance received.

178. The concept of 'Living with Risk' fundamentally promotes:
(A) Risk management
(B) Risk acceptance
(C) Risk ignorance
(D) Risk transfer

179. Priority 2 of the Sendai Framework, "Strengthening disaster risk governance to manage disaster risk," directly implies a key role for which institution?
(A) Private media houses
(B) Individual households
(C) PRIs and ULBs
(D) International research bodies

180. Consider the following potential outcomes of a successful media advocacy campaign for DM:
I. Increased public awareness about disaster preparedness.
II. Policy changes to improve building safety codes.
III. Greater accountability of government agencies.
IV. Complete suppression of all disaster-related information.
Which of the given outcomes are desirable?
(A) I, II and IV
(B) I, II and III
(C) II, III and IV
(D) I and IV only

181. A consensus-based approach is preferred for resolving conflicts in CBDRR because:
(A) It is the fastest way to make a decision.
(B) It is mandated by international law for all community projects.
(C) It ensures that the final plan has the commitment of all major groups.
(D) It avoids the need for any technical input.

182. A 'Citizens Forum' where people can question the mayor about the city's flood preparedness plan is an example of:

Downloaded from www.pdf.tube

(C) The local Panchayati Raj Institution
(D) The State Disaster Management Authority

202. The unique strength of NGOs and volunteer organizations in DRR comes from their:
(A) Grassroots connect, flexibility, and focus on vulnerable groups.
(B) Legal authority to make laws.
(C) Access to military equipment.
(D) Power to levy taxes.

203. A community action for preparedness would be:
(A) Rebuilding a damaged school.
(B) Constructing a new sea wall.
(C) Clearing rubble after an earthquake.
(D) Preparing and updating a list of vulnerable persons.

204. Participatory risk assessment methods are fundamental to CBDRR because they:
(A) Are the only scientifically valid methods available.
(B) Empower the community and ensure plans are grounded in local reality.
(C) Are mandated by law for all disaster situations.
(D) Are cheaper than any other form of assessment.

205. Consider the following as components of a 'culture of safety':
I. Individual and collective responsibility for safety.
II. Proactive risk reduction measures.
III. Continuous learning and awareness.
IV. A belief that disasters are entirely unpreventable.
Which of the above are correct components?
(A) I, II and IV
(B) I, II and III
(C) II, III and IV
(D) I and IV only

206. 'Social Wealth' is a critical component of community resilience because it:
(A) Guarantees external financial aid.
(B) Is a direct measure of the community's GDP.
(C) Replaces the need for physical infrastructure.
(D) Provides the basis for mutual support and collective action in times of crisis.

207. One of the seven global targets of the Sendai Framework is to substantially increase:
(A) The availability of and access to multi-hazard early warning systems.
(B) The number of natural hazards.
(C) The global military expenditure on disasters.
(D) The cost of disaster insurance.

208. When a community forum discusses and debates the government's new resettlement policy after a landslide, it is functioning as a:
(A) Formal court
(B) Public sphere
(C) Disaster response team
(D) Financial institution

209. The fact that disasters often have a more severe impact on women, children, the elderly, and the poor is a central:
(A) Media advocacy issue
(B) Social justice challenge
(C) Conflict resolution topic
(D) Resilience building goal

210. Match List I with List II and select the correct code:
List I: (Action)
P. A community planting mangroves.
Q. A village preparing an evacuation plan.
R. People helping each other after a flood.
S. Unequal aid for different social groups.
List II: (Disaster Management Concept)
1. Social Justice Challenge
2. Preparedness
3. Mitigation
4. Community as First Responder / Social Wealth
(A) P-3, Q-2, R-4, S-1
(B) P-1, Q-2, R-3, S-4
(C) P-3, Q-4, R-1, S-2
(D) P-2, Q-3, R-4, S-1

NODIA

211. What is the most fundamental aspect of building resilience at the community level?
(A) Depending solely on government for all actions.
(B) Focusing only on building large concrete structures.
(C) Increasing the coping capacities of the community members and institutions.
(D) Preventing media from reporting on local

192. A key function of civil society organizations is to act as a 'watchdog'. In the context of Disaster Management (DM), this means:
(A) Guarding relief warehouses.
(B) Monitoring government actions for transparency, effectiveness, and equity.
(C) Watching for the approach of a hazard.
(D) Operating surveillance drones over affected areas.

193. The primary output of a participatory risk assessment process is a:
(A) Legally binding international treaty.
(B) Community-owned action plan for risk reduction.
(C) Highly technical scientific report.
(D) List of people to be blamed for the disaster.

194. A "culture of safety" means that safety considerations are:
(A) Integrated into all aspects of life, from home to workplace to community.
(B) Thought about only after a disaster.
(C) The sole responsibility of the government.
(D) A low priority compared to economic development.

195. Consider the following entities involved in disaster management:
I. The local community
II. Panchayati Raj Institutions
III. Non-Governmental Organizations
IV. Civil society organizations
V. The media
Which of these play a role in Community Based Disaster Risk Reduction?
(A) I and II only
(B) I, II and III only
(C) III, IV and V only
(D) All I, II, III, IV and V

196. The term 'Community Assets' refers to all of the following EXCEPT:
(A) The skills and knowledge of the people.
(B) Strong social networks and local institutions.
(C) Physical resources like community buildings and equipment.
(D) The vulnerabilities and weaknesses of the community.

197. The paradigm of 'Living with Risk' is an acknowledgement that:
(A) Risk is a static, unchangeable feature of a location.
(B) All risks can be completely eliminated with enough money.
(C) Risk is a dynamic condition that needs to be continuously managed.
(D) Communities should be passive in the face of hazards.

198. Resolving a conflict over the distribution of relief materials through a collaborative process involving all affected groups is an example of:
(A) Imposing authority
(B) Building consensus
(C) Ignoring the problem
(D) Media advocacy

199. Ensuring that disaster warnings are communicated in local dialects and through accessible channels for people with disabilities is an issue of:
(A) Financial management
(B) Structural engineering
(C) Political negotiation
(D) Social justice

200. Consider the following statements:
Statement I : Community resilience can be enhanced by strengthening social capital.
Statement II : Social capital refers to the trust, networks, and norms of reciprocity that facilitate coordinated action.
Which of the above statement(s) is/are correct?
(A) Both Statement I and Statement II are correct, and Statement II is the correct explanation of Statement I.
(B) Both Statement I and Statement II are correct, but Statement II is not the correct explanation of Statement I.
(C) Statement I is correct, but Statement II is incorrect.
(D) Statement I is incorrect, but Statement II is correct.

201. Which institution has the primary local governance role in implementing disaster risk reduction strategies in a village?
(A) A national-level NGO
(B) A corporate foundation

Click Here to Buy book on Amazon

district authorities and mobilize community vigilance.
(D) Wait for the bridge to collapse and then start rescue operations.

164. What is the difference between a community's 'assets' and its 'social wealth'?
(A) There is no difference; the terms are identical.
(B) 'Assets' refers only to money, while 'social wealth' refers to land.
(C) 'Social wealth' is a government grant, while 'assets' are privately owned.
(D) 'Assets' is a broader term including physical and financial aspects, while 'social wealth' specifically refers to networks and trust.

165. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Involving communities in risk mapping is more than just a data collection exercise.
Reason (R) : The process of participatory mapping itself is a tool for awareness generation and community empowerment, leading to a greater sense of ownership over risk reduction plans.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

166. A collaborative approach to resolving conflicts in community planning is vital because:
(A) It ensures that decisions are made quickly, without any discussion.
(B) It helps build trust and leads to more sustainable and widely accepted outcomes.
(C) It allows the most powerful person to impose their will.
(D) It is a legal requirement in all situations.

167. The role of 'public voices' is to ensure that disaster management is:
(A) Technocratic and expert-driven only.
(B) Secretive and non-participatory.
(C) Managed entirely by private corporations.
(D) Democratic, responsive, and accountable to the people.

168. One of the main challenges of media advocacy in DM is:
(A) The tendency to focus on sensationalism over constructive information.
(B) The lack of any audience for disaster-related news.
(C) Government restrictions on all forms of media.
(D) The extremely high cost of broadcasting.

169. Strengthening a community's disaster literacy directly enhances its:
(A) Economic inequality.
(B) Social conflicts.
(C) Self-help capacity and resilience.
(D) Dependence on external aid.

170. Consider the following statements regarding the role of Non-Governmental Organizations (NGOs):
I. They can act faster and with more flexibility than government bureaucracies.
II. Their primary role is to enforce laws and punish offenders.
III. They often work closely with the most vulnerable and marginalized communities.
IV. They play a significant role in advocacy and capacity building.
V. They are formal parts of the government structure.
Which of the above statement(s) is/are correct?
(A) I, II and IV
(B) I, III and IV
(C) II, III and V
(D) I, IV and V

171. The responsibility for implementing urban planning regulations to prevent construction in hazardous zones primarily lies with:
(A) The community
(B) NGOs
(C) The National Disaster Response Force (NDRF)
(D) Urban Local Bodies (ULBs)

172. The active involvement of people in identifying, analyzing, treating, monitoring, and evaluating disaster risks is called:

NODIA

issues.

212. Which of the following is the best indicator of high disaster literacy in a coastal community?
(A) Most residents can name the last major cyclone.
(B) Many residents have watched movies about tsunamis.
(C) The community has a rich history of celebrating the sea.
(D) Most residents can explain what the different cyclone warning signals mean and what action to take for each.

213. The role of the local community as a 'first responder' is critical because:
(A) They have the most advanced equipment.
(B) External help often takes time to arrive, and immediate action saves lives.
(C) They are legally mandated to be in charge of all operations.
(D) They are paid for their services.

214. The preparation of a Village Disaster Management Plan (VDMP) is a key responsibility of the:
(A) State Government
(B) Gram Panchayat/Village Disaster Management Committee
(C) District Collector
(D) National Disaster Management Authority

215. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : NGOs play a crucial supplementary role in disaster management.
Reason (R) : They often have strong community links and can implement programs with flexibility and a focus on the most vulnerable, filling gaps in government response.
Which of the following is correct?
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

216. All of the following are examples of people's participation in DRR EXCEPT:
(A) A community passively waiting for relief distribution.
(B) Community members identifying evacuation routes.
(C) Villagers constructing a flood-proof embankment with their own labor.
(D) Women's groups managing a community early warning system.

217. A 'culture of prevention' within a community is best demonstrated by:
(A) A large number of casualties after every flood.
(B) Blaming neighboring villages for floods.
(C) The routine practice of clearing drainage channels before the monsoon season.
(D) Holding a large feast after a disaster has passed.

218. The primary advantage of participatory risk assessment is that it:
(A) Generates plans that are owned by the community.
(B) Is a very quick and effortless process.
(C) Requires no technical knowledge whatsoever.
(D) Leads to a single, universally applicable solution.

NODIA

219. Identify the incorrect statement about Community Assets.
(A) They include social, human, financial, physical, and natural capital.
(B) They are the strengths that a community can build upon for DRR.
(C) Indigenous knowledge is a key community asset.
(D) They are synonymous with community vulnerabilities.

220. Consider the following roles of various local institutions in disaster management:
I. Community - Acting as the first responder.
II. PRI/ULB - Implementing and enforcing local building codes.
III. NGO - Advocating for marginalized groups and providing supplementary aid.
IV. Media - Disseminating timely and accurate warnings.
V. Civil Society - Acting as a watchdog for government accountability.

naturally over time.
(C) Distributing aid based on a first-come, first-served basis.
(D) Fostering collaboration and building consensus among stakeholders.

278. A consensus-based approach to disaster recovery aims to:
(A) find the instructions of external aid agencies without question.
(B) find mutually agreeable plans through collective negotiation.
(C) ensure that the most powerful group's needs are met first.
(D) delay decision-making until a formal government body is re-established.

279. Besides resolving immediate conflicts, what is a key long-term benefit of using collaborative processes in disaster recovery?
(A) It guarantees increased international funding for the community.
(B) It eliminates the need for any future disaster preparedness.
(C) It strengthens social cohesion and trust within the community.
(D) It reduces the administrative burden on national governments.

280. The passage implies that conflict resolution in DM is not just about managing disputes but also about:
(A) identifying individuals to blame for the resource scarcity.
(B) privatizing the distribution of all relief materials.
(C) enforcing strict legal penalties for those who complain.
(D) creating an opportunity to strengthen community social bonds.

Direction : Please read the following source carefully.

The empowerment of communities in disaster management is significantly amplified through the strategic use of the public sphere. Platforms such as Citizens' Forums provide a structured space for public voices to be heard, enabling community members to articulate their concerns, needs, and priorities directly to authorities and other stakeholders. These forums transition citizens from being passive subjects to active participants in their own governance, fostering accountability and transparency in disaster management processes. The media plays a pivotal, dual role in this dynamic. On one hand, it disseminates critical information, early warnings, and safety guidelines to the public. On the other, it serves as a powerful tool for media advocacy for disaster management. By highlighting systemic gaps, showcasing community-led successes, and giving voice to the marginalized, media advocacy can influence policy, mobilize resources, and hold institutions accountable. The interplay between Citizens' Forums, public voices, and media advocacy creates a vibrant public sphere where a continuous dialogue on risk, vulnerability, and resilience can take place. This public discourse is essential for building a democratic and responsive disaster management system where community perspectives are not just acknowledged but are integral to policy and practice.

Based on the above source, attempt the following five questions.

281. What is the primary function of a Citizens' Forum in the context of disaster management?
(A) To provide a structured space for public voices to be articulated to authorities.
(B) To distribute relief supplies directly to households.
(C) To conduct scientific research on geological hazards.
(D) To replace the formal functions of local government bodies.

282. The passage describes the dual role of media in disaster management as:
(A) generating profit and entertaining the public.
(B) disseminating information and serving as a tool for advocacy.
(C) supporting government narratives and suppressing dissent.
(D) creating panic and broadcasting sensationalist stories.

283. Media advocacy for disaster management is described as a powerful tool because it can:
(A) guarantee the complete prevention of all future disasters.
(B) provide direct financial aid to affected

Downloaded from www.pdf.tube

III. The community is the first line of defence in any disaster.
IV. Local knowledge within a community is a valuable resource for DRR.

Which of the above statement(s) is/are correct?
(A) I, II and III
(B) I, III and IV
(C) II and IV only
(D) I and III only

231. The primary role of an Urban Local Body (ULB) in disaster management is related to:
(A) National security.
(B) International trade agreements.
(C) Agricultural policy.
(D) Urban governance, planning, and service delivery.

232. 'People's participation' in DRR is NOT a one-time event, but a continuous process that should be integrated into:
(A) The entire disaster management cycle.
(B) Only the post-disaster relief phase.
(C) Only the planning stage, not implementation.
(D) Only international-level discussions.

233. A civil society organization holding a public hearing on the effectiveness of the government's flood response is an example of its:
(A) Legal enforcement role
(B) First responder role
(C) Watchdog role
(D) Infrastructure development role

234. A community action for mitigation is:
(A) Reinforcing the roof of a house to withstand high winds.
(B) Listening to weather forecasts.
(C) Storing dry food and water.
(D) Participating in a search and rescue team.

235. Match List I with List II and select the correct code:
List I: (Community-Based Action)
P. Forming a volunteer task force.
Q. Cleaning drains to prevent water logging.
R. Providing first aid to the injured.
S. Applying for housing reconstruction grants.
List II: (DM Phase)
1. Response
2. Recovery
3. Mitigation
4. Preparedness

(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-1, S-2
(C) P-4, Q-3, R-2, S-1
(D) P-3, Q-4, R-1, S-2

NODIA

236. The concept of 'social wealth' is most closely related to the sociological concept of:
(A) Social stratification
(B) Social capital
(C) Social mobility
(D) Social deviance

237. The 'Living with Risk' approach requires that risk assessment is:
(A) A one-time exercise that is never repeated.
(B) Conducted only by international experts.
(C) A dynamic and continuous process.
(D) Focused only on past events.

238. In the Sendai Framework for DRR, strengthening disaster risk governance (Priority 2) involves:
(A) Focusing only on understanding the science of hazards.
(B) Investing in disaster-proof infrastructure.
(C) Preparing for response alone.
(D) Having clear policies, institutions, and budgets for DRR at all levels.

239. The most significant social justice challenge during post-disaster reconstruction is:
(A) Ensuring that reconstruction efforts do not recreate or worsen pre-existing vulnerabilities and inequalities.
(B) Rebuilding luxury hotels first.
(C) The logistical difficulty of importing building materials.
(D) Deciding on the architectural style of new buildings.

240. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The role of the community is paramount in disaster management.
Reason (R) : The community is the first to be affected and the first to respond, making its capacity and involvement crucial for saving lives.
Which of the following is correct?

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

241. A 'public sphere' where citizens can freely debate disaster-related policies contributes to:
(A) The suppression of information.
(B) Democratic and accountable disaster governance.
(C) The authority of a single leader.
(D) The breakdown of social order.

242. Media advocacy can build pressure on authorities to act by:
(A) Highlighting gaps in preparedness and response, and showcasing public suffering.
(B) Hiding the scale of a disaster.
(C) Only showing positive stories about government efforts.
(D) Refusing to report on disasters at all.

243. The ultimate aim of building disaster resilience is to:
(A) Create a disaster-proof society, which is impossible.
(B) Increase a country's military strength.
(C) Safeguard development gains and human well-being.
(D) Attract more international tourists.

244. Improving a community's 'disaster literacy' is a key component of which Sendai Framework Priority?
(A) Priority 2: Strengthening disaster risk governance.
(B) Priority 3: Investing in DRR.
(C) Priority 4: Enhancing disaster preparedness.
(D) Priority 1: Understanding disaster risk.

245. Consider the following as strategies for risk reduction in communities:
I. Building social cohesion and mutual trust.
II. Implementing and enforcing building codes.
III. Creating livelihood options that are not climate-sensitive.
IV. Ignoring geological survey warnings about land stability.
V. Promoting public awareness and education.
Which of the above are valid risk reduction strategies?
(A) I, II, III and V
(B) I, II, IV and V
(C) II, III, IV and V
(D) I, III, and IV only

246. The institutional responsibility for ensuring clean drinking water and sanitation in a village, a critical factor for post-disaster health, lies with the:
(A) An international NGO
(B) Gram Panchayat
(C) A private corporation
(D) The armed forces

247. The most defining characteristic of Community Based Disaster Risk Reduction (CBDRR) is that it is:
(A) Expert-led
(B) Government-led
(C) Donor-led
(D) Community-led

248. A volunteer organization training community members in first aid and light search and rescue is directly contributing to:
(A) The community's response capacity.
(B) The national budget.
(C) Long-term economic policy.
(D) The construction of large infrastructure.

249. Which statement best encapsulates the concept of a 'culture of prevention'?
(A) "Disasters are inevitable, so we must respond quickly."
(B) "We will rebuild, no matter the cost."
(C) "An ounce of prevention is worth a pound of cure."
(D) "Let's wait and see what happens."

250. Participatory methods like 'social mapping' and 'seasonal calendars' are used in CBDRR to:
(A) Help the community analyze its own vulnerabilities and temporal risk patterns.
(B) Finalize land records for legal purposes.
(C) Create artistic murals for the village.
(D) Fulfill a bureaucratic requirement without any real use.

Click Here to Buy book on Amazon

Direction : Please read the following source carefully.

The efficacy of Community-Based Disaster Management (CBDM) is heavily reliant on the clearly defined roles and responsibilities of various local institutions. Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs), as constitutional bodies of local self-government, are formally tasked with disaster management at the grassroots level. Their responsibilities include the integration of disaster management plans into developmental plans, allocation of financial resources, enforcement of safety codes, and coordination of relief and rehabilitation efforts. In contrast, Non-Governmental Organizations (NGOs) operate with greater flexibility and often have deeper inroads into vulnerable communities. Their role is complementary, focusing on community mobilization, capacity building, awareness campaigns, and providing last-mile delivery of services. NGOs also play a crucial role as advocates, representing the needs of marginalized groups and ensuring their inclusion in the disaster management process. The synergy between the formal, administrative machinery of PRIs/ULBs and the adaptive, community-centric approach of NGOs and other stakeholders is fundamental to creating a resilient local governance framework for disaster risk management. The absence of such collaboration can lead to fragmented efforts, duplication of resources, and gaps in service delivery, ultimately undermining the entire disaster management cycle.

Based on the above source, attempt the following five questions.

251. Which of the following best describes the primary distinction between the roles of PRIs/ULBs and NGOs in disaster management?
(A) PRIs/ULBs focus exclusively on post-disaster relief, while NGOs focus on pre-disaster preparedness.
(B) PRIs/ULBs operate as formal governmental bodies with administrative duties, while NGOs function with greater flexibility and community focus.
(C) NGOs are primarily responsible for financial allocation, while PRIs/ULBs are responsible for community mobilization.
(D) PRIs/ULBs are international bodies, whereas NGOs are strictly local entities.

252. According to the passage, what is a key responsibility of Panchayati Raj Institutions/ Urban Local Bodies?
(A) Integrating disaster management plans into broader developmental planning.
(B) Conducting international advocacy for disaster relief funds.
(C) Solely managing the operations of Non-Governmental Organizations.
(D) Focusing primarily on the needs of non-marginalized groups.

253. The passage suggests that the collaboration between PRIs/ULBs and NGOs is "fundamental" because it:
(A) eliminates the need for any governmental oversight in disaster management.
(B) ensures that NGOs receive all their funding from government bodies.
(C) combines administrative authority with grassroots community engagement for comprehensive action.
(D) allows PRIs/ULBs to delegate all their disaster management responsibilities to NGOs.

NODIA

254. What potential negative outcome is mentioned as a consequence of a lack of collaboration between local institutions?
(A) An increase in the constitutional power of local bodies.
(B) A reduction in the number of NGOs operating in a region.
(C) A complete halt of all developmental planning.
(D) Fragmented efforts and inefficient use of resources.

255. What is identified as a crucial role of NGOs, particularly concerning marginalized communities?
(A) Enforcing safety codes and building regulations.
(B) Allocating the primary budget for disaster management.
(C) Acting as advocates to ensure their inclusion and representation.
(D) Leading the formal coordination of government relief efforts.

Direction : Please read the following source

carefully.

A fundamental strategy in reducing community vulnerability to disasters is the active promotion of people's participation. This paradigm moves beyond a top-down approach where communities are passive recipients of aid, towards a model where they are central actors in their own safety. People's participation manifests through their direct involvement in the entire disaster risk reduction (DRR) process, from planning and assessment to implementation and monitoring. Civil society and volunteer organizations are pivotal in catalysing this participation. They act as facilitators, empowering communities with knowledge, skills, and organizational capacity. Community action for DRR, therefore, includes a range of activities such as forming disaster management committees, conducting awareness drills, developing local resource inventories, and contributing to early warning systems. This active engagement fosters a sense of ownership and collective responsibility. The ultimate goal is to embed a 'culture of safety, prevention, mitigation, and preparedness' within the community's social fabric. When safety becomes a shared value and a collective practice, rather than an externally imposed mandate, the community's intrinsic resilience is significantly enhanced, allowing it to better withstand and recover from shocks.

Based on the above source, attempt the following five questions.

256. What is the core principle of the people's participation paradigm described in the passage?
(A) Communities should exclusively rely on external agencies for disaster aid.
(B) Communities should be central actors in their own disaster risk reduction.
(C) Government bodies should have sole authority over all DRR activities.
(D) Volunteer organizations should replace the role of local government.

257. According to the passage, what is the primary role of civil society and volunteer organizations in DRR?
(A) To provide financial aid directly to every household.
(B) To enforce government policies without community input.
(C) To take over the functions of local disaster management committees.
(D) To act as facilitators that empower communities to participate.

258. Which of the following is NOT mentioned as an example of "community action for DRR"?
(A) Drafting national-level disaster management legislation.
(B) Forming local disaster management committees.
(C) Developing local resource inventories.
(D) Conducting community awareness drills.

259. The passage suggests that a "culture of safety" is most effectively established when:
(A) international aid is readily available after a disaster.
(B) strict penalties are imposed for non-compliance with safety rules.
(C) safety becomes a shared community value and collective practice.
(D) communities passively follow instructions from a central authority.

260. What is the implied relationship between "people's participation" and "community resilience"?
(A) Active participation is a key mechanism for enhancing community resilience.
(B) They are opposing concepts in disaster management.
(C) Community resilience is a prerequisite for people's participation.
(D) People's participation is only relevant in the post-disaster recovery phase.

Direction : Please read the following source carefully.

Participatory risk assessment methods are a cornerstone of effective community-based disaster risk reduction, marking a significant departure from expert-driven, top-down assessments. The core principle of this approach is that local communities possess invaluable indigenous knowledge about their environment, vulnerabilities, and existing capacities, which is often overlooked by external assessors. These methods actively involve community members in identifying and analyzing the hazards they face, the specific elements that make them vulnerable, and the strengths they can leverage for protection.

Downloaded from www.pdf.tube

Techniques commonly used include community risk mapping, transect walks, seasonal calendars, and vulnerability and capacity analysis (VCA). For instance, in community risk mapping, residents themselves draw maps to pinpoint hazardous locations, safe zones, vulnerable households, and critical resources like water sources or evacuation routes. This participatory process is not merely an information-gathering exercise; it is an empowering tool that raises community awareness, fosters a sense of ownership over the risk reduction process, and ensures that the resulting DRR plans are relevant, practical, and culturally appropriate. The involvement of volunteer organizations often facilitates these assessments, ensuring a structured and inclusive dialogue among all sections of the community.

Based on the above source, attempt the following five questions.

261. What is the fundamental principle behind using participatory risk assessment methods?
(A) To validate the findings of external expert assessments.
(B) To exclusively rely on scientific data for risk analysis.
(C) To transfer the financial cost of assessment to the community.
(D) To recognize and utilize the indigenous knowledge of local communities.

262. Which of the following is described as a specific technique used in participatory risk assessment?
(A) Satellite-based remote sensing.
(B) Community risk mapping.
(C) National census data analysis.
(D) Geotechnical soil testing.

263. The passage suggests that the process of participatory assessment is valuable beyond just data collection because it:
(A) provides a legal basis for land acquisition.
(B) generates revenue for the local government.
(C) empowers communities and fosters ownership of DRR plans.
(D) is faster and cheaper than expert-driven assessments.

264. What role does the passage attribute to volunteer organizations in the context of participatory assessments?
(A) To provide the final approval for the risk maps.
(B) To act as the sole source of funding for the process.
(C) To conduct the assessment independently of the community.
(D) To facilitate a structured and inclusive dialogue within the community.

265. Based on the passage, a transect walk as a participatory method would most likely involve:
(A) community members systematically walking through their area to observe and discuss risks.
(B) external experts presenting a slideshow about potential hazards.
(C) a review of historical documents and archives related to past disasters.
(D) a formal survey distributed to every household for written responses.

NODIA

Direction : Please read the following source carefully.

The concept of community risk management extends beyond simply identifying hazards; it involves a comprehensive understanding and valuation of community assets and social wealth. Community assets are not limited to physical infrastructure like roads, schools, and hospitals, but also encompass economic assets such as livelihoods and agricultural land, and natural assets like forests and water bodies. Equally important is social wealth, or social capital, which includes the networks of trust, reciprocity, local leadership, and collective action that bind a community together. Community risk mapping is a practical tool used to visualize these elements in relation to potential hazards. By mapping out not just the risks but also the assets, a community can develop strategies that are protective and restorative. For example, a map might identify a flood-prone area but also highlight the location of a community hall on higher ground (a physical asset) and the presence of a trained volunteer rescue team (a social asset). This holistic perspective supports the philosophy of 'living with risk,' acknowledging that not all risks can be eliminated. The focus thus shifts to managing these risks by strengthening community assets and social wealth, thereby enhancing the community's capacity to cope with and recover from disasters.

Based on the above source, attempt the following five questions.

266. How does the passage define "social wealth" in the context of community risk management?
(A) The total monetary value of a community's physical infrastructure.
(B) The networks of trust, local leadership, and collective action.
(C) The financial reserves held by the local government for disaster relief.
(D) The quantity of natural resources available for commercial exploitation.

267. What is the primary purpose of community risk mapping as described in the source?
(A) To create a legal document for land ownership and zoning.
(B) To visualize hazards in relation to both physical and social community assets.
(C) To determine the exact financial cost of potential disaster damage.
(D) To replace the need for early warning systems.

268. The philosophy of 'living with risk' implies that communities should focus on:
(A) managing unavoidable risks by strengthening their capacities and assets.
(B) relocating entirely from any area that has potential hazards.
(C) eliminating every single potential risk through engineering solutions.
(D) ignoring risks and focusing solely on post-disaster recovery.

269. Which of the following would be considered an example of a "community asset" as broadly defined in the passage?
(A) The level of external aid received after a previous disaster.
(B) A national-level policy on disaster management.
(C) The presence of a trained volunteer rescue team.
(D) The frequency of media coverage about the community.

270. According to the source, a holistic perspective in risk management is achieved by:
(A) focusing exclusively on the economic impact of disasters.
(B) considering only the physical infrastructure at risk.
(C) analyzing hazards independently of community strengths.
(D) identifying and strengthening both assets and social wealth to manage risks.

Direction : Please read the following source carefully.

Global policy perspectives significantly influence national and local approaches to disaster management, with the Sendai Framework for Disaster Risk Reduction (2015-2030) being the foremost guiding document. This framework represents a critical policy shift from a primary focus on post-disaster response to a comprehensive emphasis on managing disaster risk. It underscores that while the State has the primary role in DRR, this responsibility should be shared with other stakeholders, including local government and the private sector. For community-based disaster management, the Sendai Framework is particularly relevant. It sets forth four priorities for action: understanding disaster risk; strengthening disaster risk governance to manage disaster risk; investing in disaster risk reduction for resilience; and enhancing disaster preparedness for effective response and to "Build Back Better" in recovery, rehabilitation, and reconstruction. The framework explicitly calls for an all-of-society engagement and empowerment, advocating for the inclusion of communities in the design and implementation of DRR policies. It promotes a people-centered approach that strengthens community resilience by leveraging local knowledge and ensuring that risk reduction strategies are inclusive and tailored to specific local contexts, directly aligning with the core tenets of community-based risk management.

Based on the above source, attempt the following five questions.

271. What major policy shift is represented by the Sendai Framework for DRR?
(A) A shift from managing disaster risk to focusing only on post-disaster response.
(B) A shift from a multi-stakeholder approach to a state-centric model.
(C) A shift from focusing on disaster response to a comprehensive emphasis on managing risk.

Click Here to Buy book on Amazon

(D) A shift from community involvement to a purely top-down administrative approach.

272. Which of the following is one of the four priorities for action set forth by the Sendai Framework?
(A) Centralizing all disaster risk governance at the national level.
(B) Investing in disaster risk reduction for resilience.
(C) Limiting the role of the private sector in DRR.
(D) Focusing exclusively on international aid for recovery.

273. How does the Sendai Framework view the role of the community in disaster risk reduction?
(A) As passive recipients of government aid and instructions.
(B) As obstacles to the implementation of national policies.
(C) As solely responsible for funding all DRR activities.
(D) As essential partners to be included in the design and implementation of policies.

274. The concept of "Build Back Better" within the Sendai Framework applies to which phase of the disaster cycle?
(A) The recovery, rehabilitation, and reconstruction phase.
(B) The risk assessment and prevention phase.
(C) The initial phase of understanding disaster risk.
(D) The phase of strengthening disaster risk governance.

275. The passage suggests that the Sendai Framework's principles align with community-based risk management by:
(A) promoting a standardized, one-size-fits-all approach to DRR.
(B) mandating that all decisions be made by external experts.
(C) advocating for a people-centered approach that leverages local knowledge.
(D) excluding local governments from the risk management process.

Direction : Please read the following source carefully.

In the complex environment of disaster management, particularly in the post-disaster phase, the potential for conflict is high. Scarcity of resources, competing needs, inequitable distribution of aid, and breakdown of social structures can create tension among community members and between the community and external agencies. Effective disaster risk management, therefore, must incorporate strategies for conflict resolution. The most sustainable approach to this challenge is through collaboration and the building of consensus. This involves creating platforms and processes where all stakeholders, including different community groups, local leaders, government officials, and NGOs, can communicate openly, articulate their needs and grievances, and negotiate solutions collectively. Rather than imposing decisions, a consensus-based approach seeks to find common ground and develop mutually agreeable plans for relief distribution, rehabilitation projects, and long-term recovery. This collaborative process not only resolves immediate conflicts but also strengthens social cohesion and trust, which are vital components of community resilience. By fostering an environment of mutual respect and shared decision-making, communities can navigate the challenges of recovery more equitably and effectively, turning a potential source of division into an opportunity for strengthening social bonds.

Based on the above source, attempt the following five questions.

276. According to the passage, why is the potential for conflict high in post-disaster situations?
(A) Due to resource scarcity and inequitable distribution of aid.
(B) Due to an overabundance of resources and aid.
(C) Due to the strengthening of social structures and norms.
(D) Due to a lack of interest from external agencies.

277. What is presented as the most sustainable approach to conflict resolution in disaster management?
(A) Imposing decisions through a single, authoritative leader.
(B) Allowing conflicts to resolve themselves

Downloaded from www.pdf.tube

Which of the above roles are correctly stated?
(A) I, II and IV only
(B) I, II, III and V only
(C) II, III and IV only
(D) All I, II, III, IV and V are correct.

221. The Sendai Framework for DRR is intended to guide:
(A) Only the United Nations agencies.
(B) Only non-governmental organizations.
(C) The actions of states, local governments, and other stakeholders at all levels.
(D) Only the private sector.

222. When a disaster plan is developed through a series of meetings where all community sections can voice their opinions and concerns, and a final plan is agreed upon, this process is called:
(A) Autocratic decision-making
(B) Conflict generation
(C) Media-driven advocacy
(D) Collaborative and consensus-based planning

223. The 'public sphere' for disaster governance is weakened when:
(A) Information is censored and public participation is discouraged.
(B) There is open debate and discussion in the media.
(C) Citizen forums actively participate in planning.
(D) Government agencies are transparent and accountable.

224. To address 'social justice challenges' in DRR, a planner must begin by:
(A) Ignoring all social differences and treating everyone identically.
(B) Identifying the different vulnerabilities and capacities of various social groups.
(C) Providing more resources to the most powerful groups.
(D) Focusing only on technological solutions.

225. Arrange the following actions in a logical sequence for a community facing an impending cyclone warning:
I. Evacuate to the designated safe shelter.
II. Monitor official warnings and information.
III. Secure house and prepare emergency kit.
IV. Participate in post-cyclone clean-up and recovery.
(A) IV, II, III, I
(B) II, III, I, IV
(C) I, II, III, IV
(D) III, I, II, IV

226. 'Media advocacy for DM' goes beyond simple reporting and involves:
(A) Actively campaigning for policy change, awareness, and accountability.
(B) Only reporting the official government press releases.
(C) Focusing exclusively on celebrity involvement in disasters.
(D) Creating fictional stories about disasters.

227. A resilient community is one that can:
(A) Prevent any natural hazard from ever occurring.
(B) Rely completely on its own resources without any external help.
(C) Withstand and recover from a disaster event effectively, and potentially be strengthened by the experience.
(D) Ensure that no damage to infrastructure occurs during a disaster.

228. A key goal of promoting 'disaster literacy' is to:
(A) Turn every citizen into a disaster expert.
(B) Encourage people to ignore official warnings.
(C) Promote fatalism and inaction.
(D) Reduce risk-taking behavior by making people aware of consequences and safety measures.

229. A Village Disaster Management Committee (VDMC), as a local institution, is an example of:
(A) A national policy-making body.
(B) An international funding agency.
(C) A mechanism for community participation and local governance in DM.
(D) A private-sector enterprise.

NODIA

230. Consider the following statements regarding the role of a community:
I. A community's social structure can influence its vulnerability.
II. Communities are merely passive victims in disasters.

communities.
(C) influence policy and hold institutions accountable.
(D) take over the command and control functions during an emergency.

284. How does the active participation of citizens in forums contribute to governance?
(A) It fosters accountability and transparency in disaster management.
(B) It eliminates the need for elected officials.
(C) It slows down all decision-making processes indefinitely.
(D) It centralizes all power within the citizens' forum itself.

285. The creation of a "vibrant public sphere" for disaster management, as described in the passage, ultimately leads to:
(A) a reduction in the amount of information available to the public.
(B) an increase in conflicts between the media and the government.
(C) a system where community perspectives are integral to policy and practice.
(D) the exclusion of expert opinion in favor of public opinion.

Direction : Please read the following source carefully.

A critical, yet often overlooked, dimension of disaster management is the prevalence of social justice challenges. Disasters do not impact all segments of a population equally; they invariably exacerbate pre-existing social and economic inequalities. Vulnerable and marginalized groups—such as the poor, women, children, the elderly, persons with disabilities, and ethnic minorities—often bear a disproportionate burden of a disaster's impact. Their vulnerability is compounded by factors like limited access to resources, lack of political voice, social exclusion, and residence in high-risk locations. A community-based approach to disaster risk management must actively confront these challenges. This requires moving beyond a one-size-fits-all strategy and adopting a differentiated approach that specifically targets the needs and capacities of the most vulnerable. It involves ensuring their meaningful participation in decision-making processes, designing relief and recovery programs that are accessible and culturally sensitive, and protecting their rights throughout the disaster cycle. Addressing social justice is not an optional add-on but a fundamental requirement for achieving equitable and sustainable disaster risk reduction. Failure to do so not only results in unjust outcomes but also weakens the overall resilience of the entire community, as the unresolved vulnerabilities of one segment can create risks for all.

Based on the above source, attempt the following five questions.

286. What is the main argument of the passage regarding the impact of disasters?
(A) Disasters affect all members of a community equally.
(B) Disasters tend to reduce social and economic inequalities.
(C) Disasters primarily impact the wealthiest segments of a population.
(D) Disasters exacerbate pre-existing vulnerabilities and inequalities.

287. According to the passage, why do vulnerable groups bear a disproportionate burden from disasters?
(A) Because they deliberately choose to ignore early warnings.
(B) Because relief agencies intentionally discriminate against them.
(C) Due to compounded factors like limited resources and lack of political voice.
(D) Due to their inherent lack of willingness to participate in community activities.

288. What does the passage advocate for to address social justice challenges in DRR?
(A) A differentiated approach that targets the specific needs of vulnerable groups.
(B) A one-size-fits-all strategy to ensure uniformity.
(C) Focusing relief efforts only on the most vocal community members.
(D) Postponing any consideration of social justice until after recovery is complete.

289. The passage suggests that failing to address social justice in disaster management can lead to what consequence for the community as a whole?

Click Here to Buy book on Amazon

48. (B) A collaborative process involving both local communities and technical experts.
Participatory risk assessment methods are characterized by being a collaborative process that brings together local communities and technical experts. This approach combines scientific data with indigenous knowledge and local perceptions of risk. By involving residents directly, the assessment ensures that the findings are relevant and that the community develops a sense of ownership over the resulting disaster management and risk reduction plans.

49. (B) The Effect is a direct consequence of the Cause.
A lack of disaster literacy directly leads to high casualties during a hazard event because community members may not understand warning signs or how to respond. Even if an official warning is issued, its effectiveness depends on the public's ability to interpret and act upon it. This relationship underscores the critical importance of education and awareness in reducing vulnerability and saving lives.

50. (A) A public platform for dialogue and participation in governance and decision-making.
In the context of disaster risk reduction, a citizen's forum is a public platform that facilitates dialogue and participation in governance. It allows citizens to engage with decision-makers and voice their concerns about safety policies. By providing a space for democratic deliberation, these forums enhance the transparency and responsiveness of disaster management plans, ensuring they are better aligned with the needs of the people.

51. (C) Coordinate immediate relief and rescue with local resources.
During the disaster response phase, the primary responsibility of a Panchayati Raj Institution is to coordinate immediate relief and rescue using local resources. As the closest level of government to the people, they can quickly mobilize volunteers and supplies. Their role is vital for ensuring that life-saving assistance reaches affected households in the critical hours before larger state or national support can be deployed.

52. (D) PRIs are formal governance structures, while NGOs are voluntary organizations with supplementary and advocacy roles.
Panchayati Raj Institutions are formal structures of local governance with statutory responsibilities for disaster management. In contrast, Non-Governmental Organizations are voluntary bodies that play supplementary and advocacy roles. While PRIs have the legal mandate to implement plans at the grassroots, NGOs often provide specialized support and work to amplify the voices of marginalized groups, ensuring a more inclusive disaster management process.

53. (C) Participatory community risk mapping.
Participatory community risk mapping is an activity where community members draw maps of their village to identify hazards, vulnerabilities, and assets. This exercise helps residents visualize the risks they face, such as flood-prone areas or unstable slopes, alongside resources like safe shelters. The process fosters a shared understanding of local safety needs and serves as a vital tool for developing community-led disaster management plans.

54. (B) Inclusion of communities, NGOs, and the private sector.
The Sendai Framework advocates for an all-of-society approach, which emphasizes the inclusion of communities, NGOs, the private sector, and other stakeholders in disaster risk reduction. This concept recognizes that the responsibility for safety is shared among all parts of society. By collaborating across different sectors, nations can build more comprehensive and resilient systems that effectively manage and reduce risks at all levels.

55. (B) II and III
Building resilience involves strengthening social cohesion, local institutions, and economic diversification. These factors enhance a community's collective ability to withstand hazards and recover more quickly. Resilience is not just about physical infrastructure; it also depends on the social and economic fabric of the society. While a resilient community can manage impacts better, it does not mean they will be completely unaffected by all disasters.

56. (A) Media advocacy for preparedness.

NODIA

(B) reduce the need for any form of government intervention.
(C) eliminate all social vulnerabilities within a community.
(D) ensure that the community will never face another hazard.

Direction : Please read the following source carefully.

The effectiveness of community-based disaster risk reduction (DRR) hinges on a strategic transition from a reactive, post-event focus to a proactive culture of prevention, mitigation, and preparedness. These three elements form a continuum of actions designed to reduce the adverse impacts of hazards. Prevention involves outright avoidance of impacts through measures such as land-use planning that prohibits construction in high-risk zones. Mitigation, often used interchangeably but distinct, aims to lessen or limit the severity of impacts when a hazard cannot be prevented. Examples include strengthening buildings to withstand earthquakes or constructing levees to reduce floodwater levels. Preparedness, the third pillar, encompasses measures taken in advance to ensure an effective response to the impact of hazards. This includes developing early warning systems, creating evacuation plans, stockpiling supplies, and conducting emergency drills. For a community, embedding this culture means that risk reduction is not a one-time project but an ongoing process integrated into daily life and development. The role of civil society and volunteer organizations is crucial in championing this proactive culture, translating technical knowledge on mitigation into local practice and ensuring that preparedness activities are community-driven and widely adopted.

Based on the above source, attempt the following five questions.

296. What is the key difference between "prevention" and "mitigation" as described in the passage?
(A) Prevention is a community-led activity, while mitigation is a government-led activity.
(B) Prevention applies to natural hazards, while mitigation applies to man-made disasters.
(C) Prevention is a short-term action, while mitigation is a long-term goal.
(D) Prevention aims to avoid impacts entirely, while mitigation aims to lessen their severity.

297. Which of the following is presented as an example of a "preparedness" measure?
(A) Developing a community evacuation plan and conducting drills.
(B) Prohibiting construction in a landslide-prone area.
(C) Strengthening the structure of a building to resist tremors.
(D) Rebuilding a damaged school after a disaster.

298. The passage advocates for a "proactive culture," which means that risk reduction should be:
(A) an ongoing process integrated into community life and development.
(B) undertaken only after a major disaster has occurred.
(C) considered a one-time project led by external experts.
(D) the sole responsibility of the national government.

299. What role is assigned to civil society and volunteer organizations in fostering this proactive culture?
(A) To enforce land-use planning laws and regulations.
(B) To provide the primary funding for large-scale mitigation projects.
(C) To translate technical knowledge and drive community-led preparedness.
(D) To lead the post-disaster response and recovery efforts exclusively.

300. Based on the source, creating a levee to control floodwaters is an act of:
(A) Mitigation.
(B) Prevention.
(C) Preparedness.
(D) Response.

Downloaded from www.pdf.tube

(A) It leads to faster economic recovery for the majority.
(B) It simplifies the process of aid distribution.
(C) It attracts more international aid and attention.
(D) It can weaken the overall resilience of the entire community.

290. Ensuring the "meaningful participation" of marginalized groups in decision-making is presented as a key strategy to:
(A) achieve more equitable and sustainable risk reduction.
(B) reduce the overall cost of disaster management.
(C) delegate all responsibility for DRR to these groups.
(D) speed up the distribution of relief materials.

Direction : Please read the following source carefully.

The ultimate aim of community-based disaster management is building resilience, which is the capacity of a community to absorb, adapt to, and recover from the effects of a hazard in a timely and efficient manner. This goes beyond mere survival; it includes the ability to restore and even enhance its essential functions and structures. A critical enabler for building such resilience is enhancing the disaster literacy of communities. Disaster literacy is not simply about being aware that disasters can happen; it is a deeper form of understanding. It encompasses the knowledge of specific local hazards, an understanding of personal and collective vulnerability, and, most importantly, the knowledge of and ability to take appropriate protective and preparatory actions. A disaster-literate community can interpret early warning signals, knows its evacuation routes, has a family emergency plan, and understands the principles of mitigation measures like retrofitting houses or protecting livelihoods. Enhancing disaster literacy involves sustained public education, regular drills and simulations, and the integration of DRR concepts into school curricula. By empowering individuals and families with practical knowledge and skills, disaster literacy transforms passive victims into proactive agents of safety, thereby laying the foundation for a truly resilient community.

Based on the above source, attempt the following five questions.

291. How does the passage define "resilience" in the context of a community?
(A) The ability to completely prevent any disaster from occurring.
(B) The total amount of financial aid a community can attract after a disaster.
(C) The ability to rebuild physical infrastructure exactly as it was before.
(D) The capacity to absorb, adapt to, and recover efficiently from a hazard.

292. What is the relationship between "disaster literacy" and "community resilience" as described in the source?
(A) Disaster literacy is a critical enabler for building community resilience.
(B) They are unrelated concepts in disaster management.
(C) Community resilience is a prerequisite for disaster literacy.
(D) Disaster literacy is only relevant for emergency response professionals.

293. Which of the following best encapsulates the concept of "disaster literacy"?
(A) A general awareness that disasters are a possibility.
(B) The ability to recall historical disaster statistics.
(C) A theoretical knowledge of disaster management frameworks.
(D) An actionable understanding of risks, vulnerabilities, and protective measures.

NODIA

294. According to the passage, which action is characteristic of a disaster-literate community?
(A) Waiting for official instructions before taking any action.
(B) Relying solely on social media for information during a crisis.
(C) Focusing only on post-disaster reconstruction efforts.
(D) Having a family emergency plan and knowing evacuation routes.

295. The passage suggests that enhancing disaster literacy helps to:
(A) transform passive victims into proactive agents of safety.

People's participation in disaster risk reduction is fundamentally a bottom-up approach that incorporates local needs and priorities into management plans. It fosters a sense of ownership and ensures the sustainability of initiatives by empowering community members to take charge of their safety. This collaborative process enhances the efficiency of early warning systems, unlike top-down models where external experts dominate the entire decision-making process.

9. (C) Preparedness
When a local body like a Panchayat Samiti creates a volunteer task force for search and rescue operations, it is performing a crucial function within the preparedness phase. This proactive step ensures that trained individuals are ready to act immediately after a disaster occurs. By building local capacity before a hazard strikes, the institution enhances the speed and effectiveness of the eventual response.

10. (A) P-2, Q-4, R-1, S-3
Various institutions have distinct roles in disaster management to ensure a comprehensive response. The community provides immediate response and local knowledge, while Panchayati Raj Institutions or Urban Local Bodies focus on governance and plan implementation. Non-Governmental Organizations offer advocacy and supplementary support, whereas the media is responsible for information dissemination and awareness. This collaborative structure utilizes the unique strengths of each stakeholder.

11. (D) To leverage grassroots connectivity and mobilize community action.
Involving civil society and volunteer organizations in disaster risk reduction is intended to leverage their strong grassroots connectivity. These organizations are effective at mobilizing community action and ensuring that safety initiatives reach the most marginalized populations. Their ability to work closely with residents allows them to facilitate capacity building and promote local ownership of disaster management strategies, supplementing the broader efforts of government agencies.

12. (B) An active process empowering communities in their own protection.
People's participation is best described as an active and ongoing process that empowers communities to take responsibility for their own protection. It goes beyond passive information sharing and involves citizens in every stage of the disaster management cycle, from risk assessment to recovery. By participating actively, community members develop the skills and knowledge necessary to reduce their vulnerabilities and build long-term resilience.

13. (C) It is a one-time campaign rather than a continuous process.
The development of a culture involving safety, prevention, mitigation, and preparedness is a continuous process rather than a one-time campaign. It requires sustained efforts to change societal behaviors and integrate risk management into daily activities. By viewing safety as a long-term commitment, communities can proactively reduce their vulnerabilities. This approach ensures that preparedness measures remain effective as new hazards emerge over time.

14. (B) The Effect is a direct consequence of the Cause.
High levels of people's participation in risk assessment directly lead to more relevant and effective disaster management plans. When local residents contribute their specific knowledge of hazards and vulnerabilities, the resulting strategies are better tailored to the actual conditions on the ground. This relationship demonstrates that community involvement is a vital driver for creating practical and sustainable measures that enhance local safety.

15. (A) Both A and R are true and R is the correct explanation of A.
Participatory risk assessment methods are essential for community-based disaster risk reduction because they empower local populations by incorporating indigenous knowledge. These methods allow residents to share their unique perceptions of risk and historical experiences with hazards. By integrating this local expertise with technical data, disaster management plans become more accurate and gain greater acceptance and ownership from the community they serve.

Click Here to Buy book on Amazon

16. (C) Statement I is correct, but Statement II is incorrect.
Civil society organizations often serve to fill the gaps left by governmental disaster management efforts, particularly in reaching marginalized or remote populations. However, volunteer organizations are typically involved in grassroots activities and community-level implementation rather than long-term national policy formulation. While they may advocate for policy changes, the primary responsibility for creating national disaster management frameworks lies with official government institutions.

17. (B) Participatory risk assessment.
When a community collectively maps flood-prone areas, identifies evacuation routes, and lists vulnerable households, it is engaging in participatory risk assessment. This exercise allows residents to visualize their own environment and understand the specific threats they face. By involving the people directly, the assessment captures localized information that formal surveys might overlook, providing a solid foundation for developing a community-led disaster plan.

18. (A) Encouraging dependency on external aid for all needs.
Strategies for reducing community risk focus on building self-reliance through awareness, education, and structural mitigation measures like retrofitting. Practicing early warning systems ensures that residents can take timely action to protect themselves. In contrast, encouraging dependency on external aid is not a valid risk reduction strategy, as it weakens local coping capacities and makes the community more vulnerable to the impacts of hazards.

19. (C) Preparedness - Forming a village disaster management committee.
Forming a village disaster management committee is a key activity within the preparedness phase. This action establishes the organizational structure needed to manage risks and respond to emergencies before they occur. While mitigation involves long-term measures and response involves immediate action, preparedness focuses on building the capacity and institutional frameworks necessary for a community to handle potential disaster events effectively and systematically.

20. (B) I, II, III and IV
Positive community actions for preparedness include conducting mock drills, identifying safe shelters, creating contingency funds, and preparing family disaster kits. These activities ensure that individuals and the collective are ready to respond when a hazard strikes. Ignoring early warnings is a dangerous behavior that increases risk. By engaging in these proactive measures, a community significantly enhances its ability to withstand disasters.

NODIA

21. (C) Collective resources and strengths used to reduce community risk.
Community assets in risk management refer to the collective resources, strengths, and capacities available within a community to reduce its risk. These include not only physical infrastructure and financial savings but also intangible elements like social networks, indigenous knowledge, and local leadership. Identifying and utilizing these assets allows a community to build resilience and effectively manage the challenges posed by natural and man-made hazards.

22. (B) Representing hazards and capacities for community planning.
The main objective of community risk mapping is to provide a visual representation of local hazards, vulnerabilities, and capacities for planning purposes. This participatory tool helps residents understand the spatial distribution of risks within their village or neighborhood. By identifying safe areas and resources, the map serves as a practical guide for developing evacuation plans and prioritizing mitigation activities based on reality.

23. (D) Managing and reducing risks that cannot be entirely eliminated.
The concept of living with risk acknowledges that some hazards are unavoidable and cannot be completely eliminated. Instead of accepting disasters as inevitable or ignoring them, this approach focuses on actively managing and reducing the associated risks. It involves implementing a combination of structural and non-structural measures to minimize potential

impacts, allowing communities to thrive despite the presence of environmental threats.

24. (A) Priority 3: Investing in disaster risk reduction for resilience.
Priority 3 of the Sendai Framework emphasizes investing in disaster risk reduction through both structural and non-structural measures. The enforcement of building codes by local bodies is a critical investment in the physical resilience of a community. By ensuring that infrastructure can withstand hazards, local authorities reduce future losses and protect lives, aligning with the framework's goal of building long-term disaster resilience.

25. (A) II, III, V, I, IV
The logical sequence for community-based disaster management begins with the formation of a representative committee to lead the efforts. This group then conducts a participatory risk assessment to understand local hazards and capacities. Based on these findings, a specific community action plan is developed and subsequently implemented. Finally, the process concludes with continuous monitoring and evaluation to update the plan, ensuring it remains effective.

26. (A) Facilitate dialogue where all stakeholders can voice concerns and negotiate a mutually agreeable solution.
Resolving conflicts through collaboration and consensus involves facilitating open dialogue where all stakeholders can express their concerns and negotiate. This approach aims to find a mutually agreeable solution that respects the needs of different groups within the community. By fostering shared understanding and cooperation, collaborative planning leads to more sustainable outcomes and strengthens the social fabric, ensuring broader support for safety initiatives.

27. (D) To provide a platform for citizens to voice their opinions, concerns, and participate in public decision-making.
A citizens' forum serves as an essential platform for public participation in disaster management. It allows residents to voice their opinions and concerns regarding safety policies and urban planning. By facilitating dialogue between the public and decision-makers, such forums enhance transparency and accountability. This engagement ensures that the specific needs of the community are addressed and that disaster management strategies are socially inclusive.

28. (B) The disproportionate impact of disasters on marginalized and vulnerable groups.
A major social justice challenge in disaster management is the disproportionate impact of hazards on marginalized and vulnerable groups. These populations often live in higher-risk areas and have fewer resources to prepare for or recover from disasters. Addressing this inequality requires targeted interventions that prioritize the needs of the disadvantaged, ensuring that protection and aid are distributed equitably across all sections of society.

NODIA

29. (C) Highlights policy gaps, promotes accountability, and disseminates preparedness information.
Media advocacy is most effective when it moves beyond sensational reporting to highlight policy gaps and promote governmental accountability. By disseminating accurate information on disaster preparedness, the media empowers the public to take protective measures. This role is crucial for ensuring that disaster risk reduction remains a priority for policymakers and that the community is well-informed about the risks they face.

30. (B) I, II and IV
Panchayati Raj Institutions are responsible for preparing village-level disaster management plans, ensuring the implementation of building codes, and organizing local volunteer teams. These grassroots governance bodies utilize local knowledge to build rural resilience. While they handle localized disaster management, acting as a nodal agency for international relations is not within their mandate, as that responsibility lies with the national or state governments.

31. (A) The ability of a community to resist, absorb, accommodate, and recover from the effects of a hazard.
Building resilience at the community level involves enhancing the collective ability to resist, absorb, and recover from the impacts of hazards. A resilient community is one that can

ANSWERS

1. (B) Acting as the first responder and providing immediate assistance.
The primary role of the local community in managing disasters involves serving as the immediate first responder. Because community members are physically present at the scene when a hazard strikes, they provide vital search, rescue, and first aid before external professional agencies arrive. Their localized presence and intrinsic knowledge of the geography and population ensure that life-saving interventions are initiated within the critical golden hour.

2. (C) Statement I is correct, but Statement II is incorrect.
Panchayati Raj Institutions are pivotal for managing disasters at the grassroots level because they possess intimate knowledge of local hazards and community vulnerabilities. While they are crucial for the distribution of relief funds, their mandate is not limited to post-disaster activities. These local bodies are actively involved in pre-disaster planning, hazard mapping, and community preparedness to ensure a holistic approach toward reducing risks.

3. (C) Generating awareness and capacity building among communities.
Non-Governmental Organizations play a vital role in the pre-disaster phase by focusing on generating awareness and building capacity among communities. By educating citizens about potential hazards and training them in preparedness techniques, these organizations empower locals to take proactive steps for their own safety. Such grassroots initiatives are essential for creating a culture of prevention, as they bridge the gap between policies and action.

4. (D) All individuals and institutions with an interest in the process.
In the context of Community Based Disaster Risk Reduction, stakeholders encompass a wide range of actors including government officials, local residents, recognized leaders, and international aid agencies. Any individual or institution that has an interest in or is affected by the risk reduction process is considered a stakeholder. This inclusive approach ensures that diverse perspectives and resources are integrated into the disaster management strategy.

5. (C) I, II and III
Effective community roles in disaster risk reduction involve participating in mock drills, identifying local hazards, and maintaining a comprehensive disaster management plan. These proactive measures build collective resilience and ensure that residents know how to respond during emergencies. Relying solely on government aid for preparedness is incorrect, as community self-reliance and proactive involvement are fundamental to reducing the overall impact of various natural hazards.

6. (B) Implementing and enforcing zoning regulations and building by-laws.
Urban Local Bodies are uniquely positioned to manage disaster mitigation through the implementation and enforcement of zoning regulations and building by-laws. By ensuring that new constructions adhere to safety standards and are not built in high-risk zones, these bodies reduce physical vulnerabilities. Their administrative power over local development allows them to integrate risk reduction measures directly into urban planning, creating a safer environment.

7. (D) Declaring a state of national emergency.
Non-Governmental Organizations provide essential support in disaster management by offering supplementary relief, acting as a bridge between the community and government, and mobilizing participation in risk reduction activities. However, they do not possess the legal authority to declare a state of national emergency, which is a sovereign function of the government. Their role is characterized by advocacy, capacity building, and providing humanitarian assistance.

8. (A) It is a top-down approach where external experts dictate all actions.

Downloaded from www.pdf.tube

sections of the community based on their actual vulnerability.

40. (A) Both A and R are true and R is the correct explanation of A.
Media advocacy plays a critical role in disaster management because it influences public opinion and holds authorities accountable. By disseminating vital information regarding preparedness and response, the media empowers the public to take proactive safety measures. This role is essential for ensuring that disaster risk reduction remains a priority and that the community is well-informed about the hazards they face daily.

41. (C) To reduce fear by empowering individuals with knowledge and skills.
The primary objective of increasing a community's disaster literacy is to reduce fear by empowering individuals with practical knowledge and skills. When people understand the risks they face and know how to respond appropriately, they are more confident and less likely to panic during an emergency. This empowerment transforms citizens from passive victims into active participants in their own safety and resilience.

42. (A) The intangible social resources like trust, networks, and cooperation that enhance resilience.
Social wealth in a community risk management context refers to intangible resources such as trust, social networks, and cooperation. These elements are vital for collective action and mutual support during times of crisis. A community with high social capital can organize more effectively to manage risks and recover from disasters, demonstrating that social connections are as important as financial assets for building resilience.

43. (D) Disaster mitigation
When an Urban Local Body cleans storm water drains before the monsoon season, it is implementing a disaster mitigation measure. This proactive action is designed to reduce the risk and impact of flooding by ensuring the drainage system functions correctly. Mitigation focus on long-term activities that minimize the potential effects of hazards, protecting the city's infrastructure and its residents from avoidable damage.

44. (B) Their effectiveness is hampered by a complete lack of local knowledge.
Community members are often the first responders at a disaster scene, and their actions in the initial hours are critical for saving lives. Their effectiveness is actually enhanced by their intimate local knowledge, which allows them to navigate the area and identify vulnerable neighbors quickly. They provide immediate search, rescue, and first aid before professional teams arrive, making them essential to the response.

45. (D) All I, II, III, IV and V
Stakeholders in disaster management for a coastal village include a wide variety of groups, ranging from local fishermen's cooperatives and the Panchayat to state authorities and private business owners. Every entity that has an interest in the area or is affected by potential hazards is a stakeholder. An inclusive approach involving all these parties is necessary for comprehensive and effective disaster risk reduction.

46. (D) A community collectively planting mangroves along a coastline to reduce storm surge impact.
People's participation in the mitigation phase is best illustrated by proactive actions like planting mangroves along a coastline. This community-led initiative serves as a natural barrier to reduce the impact of storm surges and coastal erosion. By engaging in such activities, the community takes direct responsibility for reducing its vulnerability to future hazards, demonstrating the power of collective action in disaster mitigation.

47. (A) Advocacy, awareness campaigns, and training programs.
Civil society organizations contribute to creating a culture of safety primarily through advocacy, awareness campaigns, and training programs. These organizations work to change mindsets and behaviors by educating the public about risks and preparedness. Their grassroots presence allows them to reach diverse populations, fostering a shared sense of responsibility and empowering individuals to take proactive measures for their own safety.

NODIA

maintain essential functions during a disaster and bounce back effectively afterward. This requires a combination of strong social networks, diversified economic resources, well-maintained infrastructure, and effective local institutions capable of managing risks and response.

32. (B) A basic understanding of disaster risks and the knowledge of what to do before, during, and after a disaster.
Disaster literacy refers to the community's basic understanding of local risks and the practical knowledge required to act safely before, during, and after a disaster. It empowers individuals to interpret early warnings, follow evacuation protocols, and apply first aid. Increasing disaster literacy is a fundamental strategy for reducing vulnerability, as it ensures that citizens are informed and prepared to protect themselves.

33. (B) High levels of internal conflict and distrust.
Social wealth contributes to community resilience through strong social networks, kinship ties, and effective local leadership. These elements facilitate cooperation and mutual support during crises. In contrast, high levels of internal conflict and distrust weaken the social fabric and hinder collective action. A cohesive community with a shared sense of identity is better equipped to manage risks and recover from disaster impacts.

34. (A) Capacity or Asset
In a participatory risk mapping exercise, a school building identified as a potential evacuation shelter is classified as a capacity or asset. These resources represent the strengths and facilities available within a community to reduce risk and provide safety during an emergency. Recognizing such assets is crucial for effective planning, as it allows the community to utilize existing infrastructure to protect vulnerable residents.

35. (B) P-4, Q-3, R-1, S-2
Disaster management concepts are defined by their specific roles in protecting society. Resilience refers to the ability to bounce back from shocks, while disaster literacy involves understanding safety measures. The public sphere serves as an arena for public debate, ensuring that governance is transparent. Social justice focuses on ensuring equitable protection and aid for vulnerable groups. Together, these elements form a comprehensive framework.

36. (A) Both Statement I and Statement II are correct.
The Sendai Framework for Disaster Risk Reduction is a global agreement that shifts the focus from post-disaster response to proactive risk reduction. It outlines seven global targets and four specific priorities for action to be achieved by 2030. This framework guides nations and local authorities in strengthening disaster risk governance and investing in resilience to minimize the social and economic impacts of disasters.

37. (C) Conflict resolution through collaboration
Resolving disputes over resource allocation by involving community leaders, government officials, and affected families in a joint meeting is an example of conflict resolution through collaboration. This process encourages open communication and negotiation to find a solution that satisfies multiple stakeholders. By reaching a consensus, the community ensures that recovery efforts are perceived as fair and transparent, reducing social tensions.

38. (B) They are crucial for ensuring accountability and shaping responsive disaster management policies.
Public voices are essential in disaster risk management for ensuring that policies are responsive to the actual needs of the people. They act as a mechanism for accountability, holding authorities responsible for the effectiveness of safety measures. By participating in the public sphere, citizens can influence decision-making and ensure that disaster management strategies are inclusive and reflect local realities and priorities.

39. (D) The tendency for recovery resources to be captured by the more powerful and well-connected sections of the community.
A significant challenge to social justice in disaster recovery is the risk of elite capture, where resources are dominated by powerful or well-connected groups. This can lead to the neglect of marginalized populations who may need the most assistance. Ensuring equitable recovery requires transparent mechanisms and active participation to guarantee that aid reaches all

Click Here to Buy book on Amazon

When media outlets campaign for family disaster kits, they are engaging in media advocacy for preparedness. This proactive role helps to educate the public and encourages individuals to take personal responsibility for their safety. By repeatedly highlighting the importance of being ready for emergencies, the media contributes to building a culture of safety and ensures that citizens are better equipped to handle hazards.

57. (C) A high prevalence of social conflict and division.
Community assets include local volunteer networks, indigenous knowledge, and well-maintained physical facilities like shelters. These resources are strengths that can be utilized to reduce risk and respond to disasters. In contrast, social conflict and division are liabilities that weaken a community's ability to act collectively. A cohesive community is more resilient because it can leverage its internal trust and cooperation during crises.

58. (A) Open and inclusive discussion and debate on disaster-related issues.
The concept of a public sphere in disaster management promotes open and inclusive discussion on safety issues. It provides an arena where public opinion can be formed and expressed, influencing policies and actions. By encouraging democratic deliberation, the public sphere ensures that disaster governance is transparent and accountable, and that the voices of different sections of society are heard in the planning process.

59. (D) Enforcing regulations against construction on natural drainage channels and ensuring their regular de-silting.
An Urban Local Body official demonstrates the most appropriate role in reducing flood risk by enforcing land-use regulations and ensuring maintenance of drainage systems. Preventing construction on natural channels and regular de-silting are critical mitigation measures that address the root causes of urban flooding. These administrative actions protect the city's infrastructure and residents by managing the environment proactively before a hazard event occurs.

60. (C) P-4, Q-2, R-1, S-3
Different institutions play specific roles in disaster risk reduction activities. Urban Local Bodies are responsible for enforcing building by-laws, while Non-Governmental Organizations are effective at mobilizing volunteers for awareness campaigns. The local community acts as the first responder using indigenous knowledge, and the media serves a crucial role in broadcasting early warnings to the public. Together, these actors create a multi-layered disaster management system.

61. (C) Seeking a 'win-win' outcome through shared understanding and negotiation.
Conflict resolution through collaboration and consensus is based on the principle of seeking a win-win outcome. This involves shared understanding and negotiation among all parties to reach an agreement that addresses the concerns of everyone involved. By moving away from majority-rule or unilateral decisions, this approach builds trust and ensures that the final disaster management plan is sustainable and widely accepted by the community.

NODIA

62. (D) Social justice challenges.
Identifying and prioritizing vulnerable households, such as those headed by single women or elderly individuals, is a direct consideration of social justice challenges. Disasters often exacerbate existing social inequalities, making certain groups more at risk. Addressing these needs ensures that disaster management is equitable and that protection and assistance are provided to those who need it most, preventing them from being left behind.

63. (C) Statement I is incorrect, but Statement II is correct.
Living with risk does not mean ignoring safety measures; rather, it is about acknowledging and actively managing residual risks that cannot be entirely eliminated. This approach encourages communities to implement proactive strategies to minimize the potential impacts of hazards. By accepting that some risk always exists, society can better prepare for and adapt to environmental challenges, ensuring a more resilient and sustainable future.

64. (B) Retrofitting houses to make them earthquake-resistant.

112. (B) Public opinion can be formed and expressed, influencing policy and action.
In disaster governance, the public sphere refers to an arena where public opinion is formed and expressed, thereby influencing policy and action. This space facilitates democratic discussion and ensures that disaster management plans are transparent and responsive to the needs of the people. By engaging in the public sphere, citizens can hold authorities accountable and advocate for safer, more inclusive disaster risk reduction strategies.

113. (B) The special needs and vulnerabilities of marginalized groups.
A social justice approach to disaster management prioritizes the special needs and vulnerabilities of marginalized groups. This recognizes that certain populations, such as the poor, elderly, and persons with disabilities, face higher risks during disasters. By ensuring that aid and protective measures are distributed equitably, this approach aims to reduce pre-existing social inequalities and provide everyone with a fair opportunity to be safe and recover.

114. (A) Media advocacy for accountability.
An investigative report on the poor quality of materials used in a cyclone shelter is a clear example of media advocacy for accountability. By exposing such failures, the media pressures authorities to ensure safety standards are met and that public funds are used correctly. This watchdog role is vital for maintaining the integrity of disaster-resistant infrastructure and protecting the community from avoidable risks during hazards.

115. (A) Both A and R are true and R is the correct explanation of A.
Community resilience depends on both strong infrastructure and a strong social fabric. Social wealth, consisting of networks, trust, and cooperation, is critical for collective action during and after a disaster. These intangible assets enable community members to support each other and coordinate resources effectively. A cohesive society is better equipped to absorb the impact of hazards and recover more quickly through mutual help and shared responsibility.

116. (D) A reduction in vulnerability and an increase in capacity.
Improving disaster literacy within a community directly contributes to a reduction in vulnerability and an increase in capacity. When people understand local risks and know how to take appropriate safety measures, they are less susceptible to the impacts of hazards. Knowledge empowers citizens to act correctly during emergencies, enhancing the collective ability of the community to manage disasters and build a more resilient and prepared environment.

117. (C) Panchayati Raj Institutions (PRIs)
In rural India, Panchayati Raj Institutions are statutorily empowered to prepare disaster management plans for their area of jurisdiction. These local self-government bodies are responsible for coordinating risk reduction and response at the village and block levels. By using their local authority and knowledge, PRIs ensure that disaster management is integrated into grassroots planning, making safety initiatives more responsive to the specific needs of rural populations.

118. (B) Mobilize communities and advocate for the vulnerable.
The most significant role of civil society and volunteer organizations lies in their ability to mobilize communities and advocate for the rights of the most vulnerable. These groups bridge the gap between official agencies and grassroots populations, ensuring that disaster management is inclusive. Their focus on advocacy and capacity building empowers marginalized individuals to participate in decision-making and access the support they need for safety and recovery.

119. (D) Community vulnerability
Finding that the only well in a village is located in a flood-prone area highlights a significant community vulnerability. This physical condition increases the risk of water contamination and loss of essential resources during a hazard event. Identifying such vulnerabilities through participatory assessment is crucial for planning, as it allows the community to prioritize mitigation actions, such as building protective walls or finding alternative water sources.

120. (B) II, III, and IV

Downloaded from www.pdf.tube

process. When the delivery of aid is insensitive or unfair, it exacerbates the original suffering caused by the hazard. Preventing this requires ensuring that all disaster management activities are equitable, transparent, and respectful, focusing on the dignity of the individuals who have already been affected.

73. (C) Community Based Disaster Risk Reduction (CBDRR).
Community Based Disaster Risk Reduction is a process where communities develop their own disaster management plans with facilitation from external agencies. This approach emphasizes local ownership and utilizes indigenous knowledge to identify and manage risks. By involving residents as active participants rather than passive recipients of aid, CBDRR ensures that risk reduction strategies are contextually appropriate and sustainable over the long term.

74. (A) Conducting diplomatic negotiations with other countries for aid.
Panchayati Raj Institutions are responsible for identifying vulnerable groups, maintaining local resource lists, and spreading awareness within their jurisdiction. These activities are essential for local disaster preparedness. However, conducting diplomatic negotiations with other countries for international aid is a function of the national government. PRIs focus on grassroots governance and local action, while international relations are handled at the highest level of the state.

75. (A) III, IV, II, I
The typical phases of the disaster management cycle follow a logical chronological order: mitigation, preparedness, response, and recovery. Mitigation involves long-term measures to reduce risk, while preparedness ensures readiness before a hazard strikes. Response includes the immediate actions taken during the emergency, and recovery focuses on restoring and rebuilding the community afterward. This continuous cycle aims to reduce future vulnerabilities through lessons learned.

76. (B) Capture local perspectives and knowledge that technical surveys might miss.
The main advantage of participatory risk assessment methods like community mapping is their ability to capture local perspectives and indigenous knowledge. Residents often possess unique insights into historical hazard patterns and localized vulnerabilities that technical surveys might overlook. By integrating this grassroots information with scientific data, communities can develop more accurate and effective disaster management plans that are truly representative of their specific environment.

77. (C) A society that prioritizes taking proactive steps to avoid or reduce disaster impacts.
A culture of prevention describes a society that prioritizes proactive steps to avoid or reduce the impacts of disasters. Instead of merely reacting to events, such a society integrates risk reduction into its daily life and planning processes. This involves ongoing education, awareness, and the implementation of mitigation measures. The goal is to minimize potential losses by addressing vulnerabilities before hazards result in catastrophic outcomes.

78. (D) Focusing on psychosocial support and livelihood restoration.
In the recovery phase, Non-Governmental Organizations often play a key role by focusing on psychosocial support and livelihood restoration for affected populations. While government bodies manage overall reconstruction, NGOs provide specialized services that address the emotional and economic long-term needs of survivors. Their grassroots presence and flexible nature allow them to tailor these interventions to the specific requirements of different groups within the community.

NODIA

79. (C) Statement I is incorrect, but Statement II is correct.
Community risk mapping is not exclusively done by trained cartographers; it is a participatory tool designed for community members. This process allows residents to visualize and analyze their own risks and resources based on their lived experiences. By creating their own maps, villagers develop a shared understanding of local hazards and vulnerabilities, which empowers them to take collective action in disaster planning.

80. (B) I, II and III
Valid risk reduction strategies include diversifying livelihoods, enforcing land-use zoning, and

conducting public awareness campaigns. These measures help build resilience and reduce vulnerability to hazards. In contrast, construction in high-risk zones without safety precautions is a dangerous practice that increases risk. Effective disaster management requires proactive planning and adherence to safety standards to protect the community from avoidable losses and enhance overall safety.

81. (B) The Hyogo Framework for Action.
The Sendai Framework for Disaster Risk Reduction, adopted in 2015, succeeded the Hyogo Framework for Action, which governed global DRR from 2005 to 2015. The Sendai Framework builds on the progress made previously while emphasizing a stronger shift toward managing disaster risk rather than just responding to disasters. It provides a comprehensive global roadmap for reducing disaster mortality and economic losses by the year 2030.

82. (A) A general agreement that all stakeholders can support.
Consensus in decision-making implies a general agreement that all stakeholders can support, even if it is not everyone's first choice. It is achieved through negotiation and shared understanding, ensuring that the final decision respects the concerns of diverse groups. This approach builds trust and commitment within the community, making the resulting disaster management plans more sustainable and widely accepted than those imposed unilaterally.

83. (C) Social justice and participatory governance.
When public voices are ignored in large projects like dams, leading to the displacement of vulnerable groups without proper resettlement, it represents a failure in social justice and participatory governance. This neglect exacerbates the vulnerability of marginalized populations and disregards their fundamental rights. Ensuring ethical disaster management requires inclusive processes where all affected citizens can participate in decisions that impact their lives and livelihoods.

84. (D) Community resilience and disaster literacy.
A local radio station that broadcasts weather updates and interviews with officials contributes significantly to community resilience and disaster literacy. By providing timely and accurate information, the station empowers residents to take protective actions and stay informed about local hazards. This continuous dissemination of knowledge builds the community's capacity to prepare for and respond to emergencies, reducing overall vulnerability to natural disasters.

85. (B) P-3, Q-4, R-1, S-2
Disaster management concepts are illustrated through practical examples. A trained team of local volunteers is a community asset, while unequal aid distribution represents a social justice challenge. Media advocacy is seen in newspaper editorials demanding better systems, and living with risk is exemplified by farmers adapting through salt-tolerant crops. These examples demonstrate how different strategies and challenges manifest in the real-world pursuit of resilience.

86. (B) Resilience
The ability of a community to function, even at a reduced level, during and after a disaster is a key component of its resilience. Resilience encompasses the capacity to absorb shocks, maintain essential services, and recover efficiently. A resilient community possesses the social and institutional strength to manage impacts and adapt to changing conditions, ensuring that it can sustain its members through the challenges of a hazard event.

87. (D) It increases the cost and complexity of all projects, making them unfeasible.
People's participation in disaster risk reduction incorporates indigenous knowledge, builds local capacity, and promotes the sustainability of initiatives. While it requires coordination, it does not necessarily make projects unfeasible. In fact, by fostering ownership and utilizing local resources, participation often makes disaster management more effective and cost-efficient in the long run. It ensures that solutions are culturally appropriate and well-supported by the community.

88. (A) Capacity building and recovery.
When an NGO trains women as masons to build earthquake-resistant houses, it is contributing to capacity building and recovery. This initiative empowers community members

Click Here to Buy book on Amazon

with professional skills that enhance structural safety. By focusing on sustainable rebuilding, the NGO helps the community reduce its future vulnerability to seismic hazards. Such programs promote self-reliance and ensure that the recovery process leads to long-term improvements in local resilience.

89. (C) Panchayati Raj Institutions.
A Village Disaster Management Committee is a vital local institution typically promoted and supported by Panchayati Raj Institutions. These committees serve as the operational arm for disaster management at the village level, facilitating participatory risk assessment and planning. By functioning under the PRI structure, VDMCs ensure that disaster risk reduction is integrated into local governance, making safety initiatives more localized, democratic, and responsive to residents.

90. (A) Both A and R are true and R is the correct explanation of A.
Social justice is a critical consideration because disasters often exacerbate existing inequalities, making poor and marginalized groups even more vulnerable. These populations frequently lack the resources to prepare for hazards or recover from losses. Ensuring equity in disaster management requires addressing these disparities through targeted assistance and inclusive planning, thereby preventing the disaster from deepening social and economic divides within the community.

91. (D) Complementary and participatory
The role of civil society organizations in disaster management is best described as complementary and participatory. These organizations work alongside government bodies to provide supplementary aid, advocate for the rights of the vulnerable, and mobilize community action. Their grassroots presence and flexible approach allow them to fill gaps in formal response systems, ensuring that disaster risk reduction efforts are more inclusive and reach all sections of society.

92. (B) Identifying evacuation routes and conducting drills.
Identifying evacuation routes and conducting drills are essential activities within the preparedness phase of a community. These measures ensure that residents are ready to take immediate and correct action when a hazard strikes. While building structures relates to mitigation and rebuilding relates to recovery, preparedness focuses on the readiness of people and systems to respond effectively, thereby minimizing loss of life during emergencies.

93. (C) Strong social bonds and trust enable communities to cooperate and support each other during a crisis.
The concept of social wealth is based on the idea that strong social bonds, trust, and cooperation are essential for community resilience. During a crisis, these intangible resources allow residents to organize collective action and provide mutual help. A community with high social capital can navigate disasters more effectively than one that is fragmented, as members are more likely to support each other through shared responsibility.

94. (D) They enhance transparency, accountability, and inclusivity.
Public voices and a vibrant public sphere are crucial for disaster risk governance because they enhance transparency, accountability, and inclusivity. By providing a platform for citizens to express their concerns and question policies, these elements ensure that disaster management plans are socially responsive. This democratic engagement holds decision-makers responsible for their actions and guarantees that the needs of marginalized groups are considered in planning.

95. (C) I, II, III, and IV
The Sendai Framework for Disaster Risk Reduction is a non-binding agreement adopted in 2015 that emphasizes managing risk rather than just disasters. It replaced the previous Hyogo Framework for Action and provides a global roadmap for reducing mortality and economic losses by 2030. While it calls for an all-of-society approach, its primary focus is not on military intervention, but on strengthening governance and investing in resilience.

96. (B) Media advocacy by showcasing best practices.
When media outlets broadcast stories about communities successfully implementing warning systems, they are performing media advocacy by showcasing best practices. These reports inspire other communities to adopt similar proactive

Downloaded from www.pdf.tube

measures and provide practical examples of how localized risk reduction can work. By highlighting positive outcomes, the media encourages a proactive culture of safety and demonstrates the value of community-led initiatives in disaster management.

97. (B) Integrating DRR measures into urban planning and development.
Urban Local Bodies are best positioned to reduce disaster risk by integrating risk reduction measures into urban planning and development. This includes enforcing building codes, managing land use, and maintaining drainage infrastructure. By incorporating safety considerations into the growth of the city, these bodies can prevent the creation of new risks and reduce the vulnerability of existing residents, leading to a more resilient urban environment.

98. (A) Conducting immediate and spontaneous search, rescue, and first aid.
In the immediate aftermath of a disaster, the most crucial role of the community is to conduct spontaneous search, rescue, and first aid. Since residents are already on the scene, their quick actions in the initial moments are vital for saving lives before professional emergency services can arrive. This immediate localized response utilizes the community's own strength and knowledge to minimize casualties and provide urgent care.

99. (C) A community transect walk to identify hazards and safe areas.
A community transect walk is a classic example of a participatory risk assessment method. During this exercise, residents walk through their local environment with facilitators to identify hazards, vulnerabilities, and safe zones. This hands-on approach allows the community to share indigenous knowledge and visualize risks in their daily context. It provides detailed, localized information that is essential for developing a practical and community-owned disaster management plan.

100. (D) Statement I is incorrect, but Statement II is correct.
Building resilience is a continuous process rather than a one-time activity. It involves strengthening social, economic, and institutional capacities to withstand and recover from hazards over the long term. While physical infrastructure is important, resilience also depends on the adaptability of people and systems. A persistent effort to manage risks and improve local response abilities ensures that a community can face future challenges more effectively.

101. (C) Make disaster management a part of everyday life and decision-making.
The creation of a culture of prevention aims to make disaster management an integral part of everyday life and decision-making. By instilling safety as a core value, society moves toward being proactive rather than merely reactive. This long-term goal encourages individuals and communities to consider potential risks in their activities and investments, leading to a significant reduction in disaster impacts and a more resilient overall society.

102. (B) They connect the affected community with government agencies and other resource providers.
Non-Governmental Organizations play a bridging role by connecting affected communities with government agencies and other resource providers. They facilitate communication and ensure that the needs of local people are understood by higher-level authorities. This role is essential for ensuring that aid is delivered effectively and that marginalized populations have access to the resources and support they need for recovery and long-term risk reduction.

NODIA

103. (D) All parties who have an interest in or are affected by the disaster and the mitigation efforts.
Stakeholders in community-based disaster management include all parties who have an interest in or are affected by hazards and mitigation efforts. This comprehensive group encompasses local residents, elected officials, NGOs, the private sector, and international agencies. By involving all stakeholders, disaster management becomes more inclusive and utilizes a wider range of resources and expertise, leading to more sustainable and widely supported risk reduction strategies.

104. (A) Monitoring the proper and equitable implementation of housing reconstruction schemes.

During the recovery and reconstruction phase, Panchayati Raj Institutions are responsible for monitoring the proper and equitable implementation of housing schemes. They ensure that funds are distributed fairly and that the most vulnerable community members are prioritized in rebuilding efforts. By providing grassroots oversight, these local bodies maintain transparency and ensure that the recovery process strengthens the community and reduces its future vulnerabilities.

105. (A) I, II and IV
Community participation is most effective when it is voluntary and context-specific. While it can be facilitated by external agencies like NGOs, its strength lies in the active involvement of the community throughout the entire disaster management cycle. This engagement ensures that plans are tailored to local needs and are more sustainable. Participation is not limited to response; it is equally vital in risk assessment and mitigation phases.

106. (A) To create a risk-aware and prepared citizenry that can take appropriate safety actions.
The ultimate goal of achieving disaster literacy is to create a risk-aware and prepared citizenry capable of taking appropriate safety actions. When individuals understand the hazards they face and know the correct procedures to follow, they can protect themselves and their families effectively. This empowerment reduces reliance on external help in the immediate aftermath of a disaster and builds a strong foundation for community-wide resilience.

107. (D) A community kitchen run by local volunteers to feed survivors.
A community kitchen run by local volunteers is an excellent example of social wealth being utilized during a disaster. This collective action demonstrates the power of local social networks, trust, and cooperation in providing immediate mutual support. Such grassroots initiatives reflect the community's internal capacity to manage crises and provide for its members, showing that social capital is as crucial as physical assets for survival.

108. (B) While all risks cannot be eliminated, communities can learn to manage and reduce them.
The concept of living with risk acknowledges that while hazards cannot be completely eliminated, they can be actively managed and reduced. This approach encourages communities to move away from fatalistic attitudes and instead implement proactive strategies for safety. By understanding the environment and implementing a mix of structural and non-structural measures, society can thrive despite the presence of potential natural or man-made threats.

109. (C) Global disaster mortality, number of affected people, and economic losses.
A primary goal of the Sendai Framework is to achieve a substantial reduction in global disaster mortality, the number of affected people, and economic losses. This international agreement provides a roadmap for nations to strengthen their disaster risk reduction measures. By focusing on these clear targets, the framework aims to protect human lives and safeguard development gains from the devastating impacts of natural and man-made hazards.

110. (C) P-4, Q-1, R-2, S-3
Different phases of disaster management involve specific community activities. Mitigation includes proactive structural steps like planting trees to prevent landslides, while preparedness focuses on readiness through mock evacuation drills. The response phase involves immediate life-saving actions such as search and rescue. Finally, recovery involves long-term efforts like participating in livelihood restoration programs to help the community bounce back effectively from the impacts of a hazard.

111. (A) Facilitate a collaborative dialogue to reach a consensus.
When community groups have conflicting priorities, the best first step is to facilitate collaborative dialogue to reach a consensus. This process ensures that all viewpoints are heard and that the final decision is acceptable to the majority of stakeholders. By building agreement through negotiation, the community ensures that its disaster risk reduction efforts are sustainable and have the broad support necessary for successful and effective implementation.

Click Here to Buy book on Amazon

The responsibility for maintaining community assets like cyclone shelters often lies with local bodies like Panchayati Raj Institutions or Urban Local Bodies in collaboration with the community. While government schemes may fund construction, long-term sustainability depends on local management and oversight. This collaborative approach ensures that the facilities remain in good condition and are ready for use during emergencies, reflecting shared responsibility for community safety and protection.

129. (B) Statement I is correct, but Statement II is incorrect.
People's participation makes disaster management more democratic and effective by ensuring that local knowledge and priorities are integrated into planning. Local residents possess valuable insights into their environment and hazards that external experts may not have. By involving the community as active partners, disaster risk reduction initiatives gain greater acceptance and are more likely to be sustainable and successful in protecting lives and property at the grassroots level.

130. (D) I, II, III and IV
A community risk map typically includes the location of hazards, vulnerable households, resources like safe shelters, and evacuation routes. This participatory tool provides a visual representation of the risks and strengths within the local environment. By identifying these elements, the community can develop more accurate and practical disaster management plans. The process of mapping itself builds shared awareness and empowers residents to prioritize actions for enhancing their collective safety.

131. (C) Civil groups, NGOs, and community-based organizations.
The term civil society in disaster risk reduction includes a broad range of actors such as civil groups, non-governmental organizations, and community-based organizations. These bodies work independently of the government and private sector to advocate for safety and provide support to the public. Their involvement is essential for ensuring that disaster management is participatory and inclusive, particularly in reaching marginalized populations and mobilizing grassroots action for resilience.

132. (D) To provide immediate supplementary relief and advocate to the government on behalf of the community.
When government relief is not reaching a remote community, the most appropriate role for an NGO is to provide immediate supplementary assistance and advocate on the community's behalf. NGOs can act quickly to fill gaps in the formal response system while pressuring authorities to fulfill their responsibilities. This dual role ensures that the urgent needs of the people are met and that the systemic failures in aid delivery are addressed.

133. (C) Integrating risk reduction considerations into all sectors of development like health, education, and infrastructure.
Mainstreaming disaster risk reduction involves integrating risk considerations into all development sectors, such as health, education, and infrastructure. This approach ensures that safety is not treated as an isolated issue but as an essential part of sustainable development. By considering potential hazards in all investments and policies, nations can prevent the creation of new risks and build a more resilient society capable of withstanding environmental and human-made challenges.

NODIA

134. (B) Indigenous knowledge
A fisherman's knowledge of sea conditions and informal warning signs is an example of indigenous knowledge, a vital community asset. This localized expertise, developed over generations, provides essential information for early warning and risk assessment. Integrating such indigenous knowledge with scientific data makes disaster management more effective and culturally appropriate. It recognizes the value of local wisdom in predicting and coping with hazards, which is often crucial for saving lives.

135. (A) P-4, Q-2, S-1, R-3
Stakeholders contribute uniquely to disaster risk reduction. The community provides first response and local knowledge, while Urban Local Bodies handle planning and code enforcement. Non-Governmental Organizations focus on advocacy and capacity building, and the media ensures public awareness and government

Community Based Disaster Risk Reduction recognizes communities as active participants and utilizes their local and indigenous knowledge. The primary goal is to build community resilience through proactive risk management. Unlike top-down or purely relief-focused approaches, CBDRR empowers residents to identify and manage their own risks. This inclusive process ensures that safety measures are contextually appropriate and sustainable, leading to a more effective reduction of disaster impacts over time.

121. (C) Social and behavioral change process
The development of a culture of safety is primarily a social and behavioral change process. It involves instilling disaster awareness as a core value and encouraging proactive safety habits in individuals and communities. This long-term effort aims to transform how society perceives and reacts to risks, moving beyond physical infrastructure to focus on the readiness and responsibility of every citizen to contribute to a safer environment.

122. (A) Groups agreeing on a fair system for resource distribution.
Conflict resolution through consensus is best illustrated when different groups agree on a fair system for resource distribution after a disaster. This process involves negotiation and mutual agreement to ensure that everyone's basic needs are met transparently. By reaching a consensus, the community avoids social tension and ensures that recovery efforts are seen as equitable, fostering trust and cooperation during the difficult period of rebuilding.

123. (D) Allows marginalized groups to voice their specific needs and contest discriminatory practices.
The public sphere is crucial for addressing social justice challenges because it allows marginalized groups to voice their specific needs and contest discriminatory practices. By providing an open arena for dialogue, it ensures that the concerns of the disadvantaged are considered in disaster management. This democratic engagement helps to hold authorities accountable and promotes more inclusive policies that protect all members of society regardless of their socioeconomic status.

124. (B) Media advocacy for disaster preparedness
Broadcasting animations of earthquake safety actions, like 'drop, cover, and hold on', is an act of media advocacy for disaster preparedness. These repeated messages educate the public on lifesaving behaviors and encourage citizens to be ready for seismic events. By using its platform to spread practical safety information, the media contributes significantly to building a more disaster-literate and resilient population that is better equipped to handle emergencies.

125. (A) II, III, IV, I
Global disaster risk reduction frameworks have evolved chronologically, beginning with the International Decade for Natural Disaster Reduction in the 1990s. This was followed by the Yokohama Strategy in 1994 and the Hyogo Framework for Action in 2005. The current Sendai Framework for DRR was adopted in 2015. This progression reflects a growing global commitment to shift from purely reactive response toward a comprehensive management of disaster risks and building resilience.

126. (D) High resilience
The ability of a community to bounce back better by improving its conditions after a disaster is a hallmark of high resilience. This involves not only restoring essential services but also learning from the event to reduce future vulnerabilities. A resilient community uses the recovery phase to implement better safety standards and stronger social systems, ensuring that it is better prepared for future hazards and can sustain its members more effectively.

127. (A) To be the primary owner and actor in its own safety.
In community-based disaster risk reduction, the fundamental role of the community is to be the primary owner and actor in its own safety. This approach moves away from viewing residents as passive victims and instead empowers them to manage their own risks. By taking leadership in assessment, planning, and mitigation, the community ensures that disaster management initiatives are tailored to their specific needs and are sustainable over time.

128. (B) Local PRI/ULB in collaboration with the community

Downloaded from www.pdf.tube

Retrofitting houses to make them earthquake-resistant is a prime example of a community action for mitigation. This proactive structural measure reduces the physical vulnerability of buildings to seismic events. Unlike response or recovery activities that occur after a disaster, mitigation focuses on long-term steps taken to minimize potential future losses, protecting both lives and property through enhanced structural safety.

65. (A) Both A and R are true and R is the correct explanation of A.
Panchayati Raj Institutions are vital for successful disaster management in rural areas because they are local self-government bodies with a mandate for grassroots implementation. Their local presence allows them to tailor disaster risk reduction plans to the specific needs of their villages. By utilizing their administrative authority and community connections, these institutions ensure that safety measures are effective, inclusive, and socially sustainable.

66. (A) To supplement and support the efforts of government and communities.
The primary role of volunteer organizations in disaster management is to supplement and support the efforts of government agencies and local communities. These organizations provide additional manpower, specialized skills, and resources during all phases of the disaster cycle. Their voluntary nature allows for flexibility and rapid deployment, making them essential partners in enhancing the overall capacity of the disaster response and risk reduction systems.

67. (C) Community resilience
Community resilience is the collective capacity of a community to withstand and recover from the impacts of a disaster. It is built upon a foundation of social, economic, and institutional resources that allow the population to maintain essential functions during a crisis. A resilient community not only survives a disaster but also possesses the ability to bounce back and adapt, potentially becoming stronger through the experience.

68. (D) Social Wealth - Community's financial assets in the bank.
Social wealth does not refer to a community's financial assets in the bank; instead, it encompasses intangible resources like social networks, trust, and cooperation. These elements are critical for collective action during disasters. Other terms are correctly defined: the Sendai Framework is a global policy, risk mapping is a visual tool, and citizens' forums are platforms for public participation in disaster governance.

NODIA

69. (C) Building a culture of prevention and preparedness.
Increasing disaster literacy is a key strategy for building a culture of prevention and preparedness. When community members understand local risks and know the correct safety procedures, they are more likely to take proactive steps to protect themselves. Education and awareness transform how a society perceives hazards, moving from reactive responses to a long-term focus on reducing vulnerabilities and enhancing collective resilience.

70. (C) I, III and IV
Constructive roles of the media in disaster management include disseminating warnings, highlighting the needs of victims to mobilize support, and acting as a watchdog to ensure government accountability. These actions provide the public with vital information and foster a more responsive disaster management system. Conversely, creating panic through rumors is harmful, and the media does not have the legal authority to formulate national disaster policies.

71. (D) Allows for democratic deliberation and holds power structures accountable.
The public sphere created by media and citizen forums is important because it allows for democratic deliberation on disaster-related issues. This space enables the public to discuss policies and hold power structures accountable for their effectiveness in protecting the community. By fostering transparency and open debate, the public sphere ensures that disaster management is responsive to the actual needs and concerns of the people.

72. (A) The trauma and harm caused by a poorly managed, insensitive, or discriminatory relief and recovery process.
Secondary victimization refers to the additional trauma suffered by disaster survivors due to a poorly managed or discriminatory recovery

accountability. This coordinated effort utilizes the specific strengths of each group, ensuring a comprehensive and responsive disaster management system that addresses all levels of risk and protection for the population.

136. (A) Flood embankments being built to protect affluent neighborhoods while leaving poor settlements vulnerable.
A clear social justice challenge in the mitigation phase is when protective measures, like flood embankments, are prioritized for affluent areas while leaving poor settlements exposed. This discriminatory practice exacerbates existing social inequalities and leaves marginalized populations at greater risk. Ensuring ethical disaster management requires that mitigation efforts protect all citizens equitably, focusing on those most vulnerable to hazards rather than basing protection on economic or social status.

137. (C) The social, economic, physical, and institutional dimensions of a community.
Building community resilience requires a holistic approach that strengthens the social, economic, physical, and institutional dimensions of a society. This means having strong social networks, diversified economic opportunities, hazard-resistant infrastructure, and effective local governance. By addressing all these areas together, a community can build a comprehensive capacity to withstand shocks and recover effectively, ensuring long-term sustainability and the well-being of all its members through a integrated safety framework.

138. (A) Including disaster management topics in school curricula.
Including disaster management topics in school curricula is an effective strategy for increasing disaster literacy. By educating children about risks and safety measures, society builds a foundation of knowledge for future generations. This approach ensures that safety information reaches families and becomes part of a community's collective understanding. Early education is a powerful tool for fostering a culture of safety and preparedness, making disaster awareness an integral part of everyday life.

139. (B) The Cause is a direct contributor to the Effect.
The failure of an Urban Local Body to enforce laws against construction on floodplains is a direct contributor to the resulting damage and loss of life during rains. Administrative negligence creates vulnerabilities by allowing unsafe development in high-risk zones. This relationship underscores the critical responsibility of local authorities in disaster mitigation. Adherence to urban planning and safety regulations is essential for preventing avoidable catastrophes and protecting the lives of city residents.

140. (A) Both A and R are true and R is the correct explanation of A.
People's participation is a cornerstone of community-based disaster risk reduction because it ensures that plans are grounded in local reality. Without the active involvement of the community, disaster management initiatives often lack context, ownership, and sustainability. Engaging residents allows for the integration of local knowledge and priorities, resulting in more effective and context-specific strategies that the community is committed to implementing and maintaining for its own long-term safety.

141. (C) Identifying beneficiaries for relief distribution after a disaster.
In the pre-disaster phase, a Gram Panchayat is responsible for preparing management plans, spreading awareness, and training volunteer forces. These are proactive measures to enhance preparedness. Identifying beneficiaries for relief distribution is a post-disaster activity that occurs during the recovery phase. The focus before a hazard strikes is on building the capacity and readiness of the village to reduce potential risks and handle emergencies effectively through early localized planning.

142. (D) Preparedness
Organizing a blood donation camp in anticipation of a cyclonic storm is an example of the preparedness phase. This action ensures that essential medical resources are available for potential casualties before the hazard event occurs. Unlike response, which happens during the emergency, preparedness focuses on readiness and resource mobilization. By taking such proactive steps, community groups help to ensure a more efficient and effective medical response if the disaster results in injuries.

Click Here to Buy book on Amazon

158. (D) A participatory method for a community to identify and analyze its own risks.
Community risk mapping is a participatory method where residents identify and analyze their own risks, such as local hazards and physical vulnerabilities. This process allows the community to visualize its environment and recognize its internal capacities and resources. By involving the people directly, mapping ensures that disaster management plans are grounded in local reality and lived experience, fostering a shared understanding and ownership of the resulting safety and risk reduction strategies.

159. (A) Seven
The Sendai Framework for Disaster Risk Reduction features seven specific global targets to be achieved by the year 2030. These targets focus on reducing disaster mortality, the number of affected people, and economic losses, while also increasing the availability of early warning systems and international cooperation. By providing these clear metrics, the framework helps nations and local governments measure their progress in building resilience and reducing the overall global impact of disasters.

160. (B) P-2, Q-4, R-1, S-3
The Sendai Framework outlines four distinct priorities for action. Priority 1 focuses on understanding disaster risk, while Priority 2 emphasizes strengthening disaster risk governance. Priority 3 involves investing in disaster risk reduction for resilience, and Priority 4 centers on enhancing disaster preparedness for effective response. Together, these priorities provide a comprehensive roadmap for nations and stakeholders to systematically manage risks and build long-term resilience against environmental and human-made hazards at all levels.

161. (B) A proactive and adaptive approach to managing risks as part of life.
Living with risk is a paradigm that encourages a proactive and adaptive approach to managing unavoidable risks as an integral part of life. Rather than ignoring hazards or being fatalistic, this approach focuses on reducing vulnerability and implementing safety measures. It recognizes that some environmental threats are always present and emphasizes the importance of ongoing preparedness and adaptation, allowing communities to thrive safely despite the potential for natural or man-made disasters.

NODIA

162. (C) Statement I is correct, but Statement II is incorrect.
Social justice in disaster management ensures that the needs of the most vulnerable and marginalized populations are prioritized, recognizing that they often face higher risks. In contrast, a one-size-fits-all approach is ineffective and often unfair, as it ignores the different vulnerabilities and specific needs of various groups. Achieving justice requires tailored interventions that address existing social inequalities and ensure that protection and aid are distributed equitably across all sections of society.

163. (C) Immediately report the issue to higher district authorities and mobilize community vigilance.
A village head reflects their role in disaster risk reduction by reporting substandard construction and mobilizing community vigilance. Ensuring the quality of public infrastructure is a critical mitigation measure, as poorly built structures like bridges can fail during disasters, leading to loss of life and property. By taking proactive oversight, the local leader protects the community from avoidable risks and ensures that public investments contribute to building a safer and more resilient environment.

164. (D) 'Assets' is a broader term including physical and financial aspects, while 'social wealth' specifically refers to networks and trust.
Community assets is a broad term that includes physical resources, financial savings, and human skills available to reduce risk. Social wealth specifically refers to intangible social capital like community networks, mutual trust, and norms of reciprocity. While assets provide the material basis for safety, social wealth provides the foundation for cooperation and collective action. Both are essential for resilience, but they represent different dimensions of a community's internal strength and capacity.

165. (A) Both A and R are true and R is the correct explanation of A.
Involving communities in risk mapping is more than data collection; it is a vital tool for awareness generation and empowerment. The participatory process encourages residents to think critically

fewer resources for recovery. Ensuring equitable response requires that aid reaches all sections of society based on their actual vulnerability and need, preventing the disaster response process from deepening existing social and economic inequalities.

151. (D) Conducting sustained advocacy and awareness campaigns on mitigation and preparedness.
The most crucial role of the media for long-term risk reduction is conducting sustained advocacy and awareness campaigns on mitigation and preparedness. While live reporting is important during an event, ongoing education helps change mindsets and encourages proactive safety behaviors. By repeatedly highlighting the value of risk reduction, the media contributes to building a culture of safety and ensures that citizens are better informed and prepared to handle potential hazards.

152. (A) Coping capacity
Building resilience is essentially about increasing a community's coping capacity to handle hazards and recover from their impacts. It involves strengthening the resources, skills, and social networks that allow residents to withstand disasters. A community with high resilience can maintain essential functions during a crisis and adapt to changing conditions. Increasing coping capacity reduces overall vulnerability and ensures that the population is better prepared to manage environmental and man-made challenges.

153. (C) Disaster literacy
A community's understanding of local risks and knowledge of how to act in an emergency is termed as disaster literacy. This practical expertise empowers individuals to protect themselves and follow safety protocols correctly. Increasing disaster literacy is a fundamental strategy for building resilience, as it ensures that citizens are not passive victims but active participants in their own safety. It involves ongoing education and awareness to keep the population informed and prepared.

154. (A) Ensuring disaster-resilient urban planning and service delivery.
The most important responsibility of an Urban Local Body in disaster management is ensuring resilient urban planning and service delivery. This includes enforcing safe building codes, managing land use, and maintaining critical infrastructure like drainage systems. By integrating risk reduction into city management, ULBs can prevent the creation of new vulnerabilities and protect residents from the impacts of natural and human-made hazards, leading to a safer and more sustainable urban environment.

155. (C) I, II and IV
Community responsibilities in disaster management include acting as the first responder, participating in the preparation of local plans, and sharing indigenous knowledge about hazards. These proactive roles utilize the community's own strengths and localized expertise to enhance safety. Depending entirely on external help is incorrect, as self-reliance and local capacity building are fundamental to effective disaster risk reduction. Active involvement ensures that disaster management is responsive to the actual needs of the residents.

156. (B) Make the process more inclusive, relevant, and sustainable.
The primary purpose of people's participation in disaster risk reduction is to make the management process more inclusive, relevant, and sustainable. When community members are involved, their specific local knowledge and needs are integrated into planning, resulting in strategies that are contextually appropriate. Participation also builds local ownership and commitment, ensuring that risk reduction initiatives are maintained over the long term and effectively protect the population from potential hazard impacts.

157. (C) Changing mindsets and behaviors through awareness and training.
Civil society and volunteer organizations contribute to a culture of safety by changing societal mindsets and behaviors through ongoing awareness and training programs. These organizations work at the grassroots level to educate the public about hazards and prepared safety measures. By fostering a sense of personal and collective responsibility for risk reduction, they empower individuals to take proactive steps, moving the community toward a more resilient and safety-conscious culture over time.

NODIA

sustainability. It empowers the community to take charge of its own safety and build long-term resilience against environmental hazards.

173. (C) Coordinated with the efforts of the local government and community.
Volunteer organizations are most effective when their efforts are coordinated with the local government and community. This alignment ensures that resources are used efficiently and that aid is distributed where it is most needed without duplication. Coordination allows volunteers to play a supplementary role that strengthens the formal disaster management system. By working together, different agencies can provide a more comprehensive and organized response, enhancing the overall safety and recovery of the affected population.

174. (D) Building a small, community-managed check-dam to control flash floods.
Building a community-managed check-dam is a prime example of a structural mitigation measure. This physical intervention is designed to reduce the risk and impact of flash floods by controlling water flow. Unlike non-structural measures like mock drills or family kits, structural mitigation involves engineering and construction to protect the environment. Community participation in such projects ensures local ownership and provides a long-term physical barrier that minimizes potential damage to property and lives from water-related hazards.

175. (A) IV, II, I, III
A participatory risk assessment follows a logical sequence starting with community orientation and team formation. The team then collects information on local hazards, vulnerabilities, and capacities through exercises like mapping. This data is analyzed to prioritize the most critical risks facing the area. Finally, the findings are used to develop a community action plan for risk reduction. This systematic process ensures that disaster management strategies are based on real local needs and supported by the people.

176. (B) A culture where individuals, families, and communities routinely take steps to be ready for a disaster.
A culture of preparedness is one where individuals and the collective routinely take proactive steps to be ready for potential disasters. This includes having emergency kits, understanding warning signs, and participating in regular training. It moves society away from being reactive and emphasizes the importance of readiness as a part of daily life. By making preparedness a standard practice, communities can significantly reduce loss of life and ensure a more efficient response when hazards occur.

177. (B) The level of mutual trust and reciprocity among community members.
A key component of social wealth is the level of mutual trust and reciprocity among community members. These intangible bonds enable people to organize and support each other effectively during times of crisis. High social capital allows for the rapid mobilization of local resources and collective action, which are vital for survival and recovery. In a disaster, a community that trusts and cooperates is inherently more resilient than one characterized by social division or distrust.

178. (A) Risk management
The concept of living with risk fundamentally promotes proactive risk management. It encourages communities to acknowledge that while hazards cannot be entirely avoided, their impacts can be minimized through careful planning and safety measures. This approach emphasizes understanding local risks and implementing a combination of structural and non-structural strategies to protect the population. By prioritizing risk management, society can build long-term resilience and ensure a more sustainable existence despite the presence of environmental or human-made threats.

179. (C) PRIs and ULBs
Priority 2 of the Sendai Framework emphasizes strengthening disaster risk governance, which directly implies a key role for local institutions like Panchayati Raj Institutions and Urban Local Bodies. These bodies are responsible for creating policies, implementing safety plans, and enforcing regulations at the grassroots and city levels. Effective local governance ensures that disaster risk reduction is integrated into everyday administration, making the overall management of hazards more structured, accountable, and responsive to the needs of the community.

Downloaded from www.pdf.tube

about their environment and recognize hazards they face daily. This engagement leads to a greater sense of ownership over the resulting disaster management plans, ensuring that the community is more committed to implementing and maintaining the safety measures they helped to identify and prioritize.

166. (B) It helps build trust and leads to more sustainable and widely accepted outcomes.
A collaborative approach to resolving conflicts is vital because it builds trust and ensures more sustainable and widely accepted outcomes. When all community sections have their voices heard, the final plan is more likely to reflect shared priorities and receive broad support. This process reduces social tension and strengthens the community's ability to act collectively during a crisis. Inclusive negotiation ensures that disaster management strategies are fair and perceived as legitimate by everyone involved.

167. (D) Democratic, responsive, and accountable to the people.
The role of public voices is to ensure that disaster management is democratic, responsive, and accountable to the people. By participating in planning and expressing their concerns, citizens can influence policies to better reflect local needs. This engagement provides a check on power and ensures that authorities are held responsible for the effectiveness and equity of safety measures. Involving the public makes disaster governance more transparent and ensures that protection reaches all members of society.

168. (A) The tendency to focus on sensationalism over constructive information.
A major challenge of media advocacy in disaster management is the tendency to prioritize sensational reporting over constructive and educational information. While dramatic images attract attention, they may not provide the public with practical knowledge needed for preparedness. Effective advocacy requires a balance between reporting the scale of a hazard and providing life-saving information. Overcoming sensationalism is essential for the media to serve its true purpose of building an informed and safety-conscious population.

169. (C) Self-help capacity and resilience.
Strengthening a community's disaster literacy directly enhances its self-help capacity and overall resilience. When people possess a basic understanding of risks and know how to respond during emergencies, they are less dependent on immediate external assistance. This empowerment allows individuals and families to take proactive steps to protect their lives and property. Knowledge transformed into action is the most effective way to reduce the impact of hazards and ensure a faster recovery for the entire community.

170. (B) I, III and IV
Non-Governmental Organizations often act faster and with more flexibility than governmental bureaucracies, allowing them to provide rapid assistance. They work closely with vulnerable and marginalized communities, ensuring their needs are met during all disaster phases. Their role includes significant advocacy and capacity building, empowering locals to manage risks. While they are essential partners, they are not formal parts of the government structure, but rather supplementary voluntary bodies that strengthen the overall disaster management system.

NODIA

171. (D) Urban Local Bodies (ULBs)
The responsibility for implementing urban planning regulations and preventing construction in hazardous zones primarily lies with Urban Local Bodies. These institutions have the legal authority to manage land use and enforce building codes within cities. By ensuring that development follows safety standards, ULBs play a critical role in disaster mitigation. Their administrative oversight is essential for preventing the creation of new risks and protecting the urban population from the impacts of natural and human-made hazards.

172. (B) People's participation
The active involvement of people in identifying, analyzing, monitoring, and evaluating disaster risks is defined as people's participation. This bottom-up approach ensures that disaster management plans are grounded in local reality and incorporate the lived experiences of the community. By engaging citizens as active partners rather than passive recipients, participation fosters a sense of ownership and

202. (A) Grassroots connect, flexibility, and focus on vulnerable groups.
The unique strength of NGOs and volunteer organizations in disaster risk reduction lies in their strong grassroots connectivity and operational flexibility. They are often the most effective at reaching marginalized groups and addressing their specific needs. This flexibility allows them to innovate and adapt their programs quickly to local conditions. By focusing on advocacy and capacity building, these organizations empower communities and ensure that disaster management is socially inclusive and responsive to the most vulnerable citizens.

203. (D) Preparing and updating a list of vulnerable persons.
Preparing and updating a list of vulnerable persons is a key community action for preparedness. This proactive measure ensures that those who need the most assistance, such as the elderly or persons with disabilities, are identified before a hazard strikes. By having this information ready, the community can prioritize help during an evacuation or emergency, significantly reducing the potential for casualties among those at higher risk and ensuring a more equitable and effective local response.

204. (B) Empower the community and ensure plans are grounded in local reality.
Participatory risk assessment methods are fundamental because they empower the community and ensure that plans are grounded in local reality. By involving residents in the assessment process, disaster management strategies incorporate indigenous knowledge and lived experiences. This makes the resulting plans more accurate and contextually appropriate. Furthermore, participation builds a sense of ownership, ensuring that the community is more likely to implement and maintain the risk reduction measures they helped to identify and prioritize for themselves.

205. (B) I, II and III
A culture of safety includes individual and collective responsibility, proactive risk reduction, and continuous learning. These components together form a society that prioritizes safety as a core value. Believing that disasters are entirely unpreventable is incorrect and fatalistic. Instead, a culture of safety encourages people to understand that their actions can significantly minimize hazard impacts. Through education and awareness, communities can move beyond reactive behaviors to focus on long-term prevention and building collective resilience against various hazards.

206. (D) Provides the basis for mutual support and collective action in times of crisis.
Social wealth is a critical component of community resilience because it provides the basis for mutual support and collective action during crises. It consists of the intangible trust and networks that allow a community to organize and share resources effectively. In a disaster, these social bonds are often the most important factor for survival and recovery, as they ensure that members help one another. High social capital makes a community more adaptable and better prepared for challenges.

207. (A) The availability of and access to multi-hazard early warning systems.
One of the seven global targets of the Sendai Framework is to substantially increase the availability of and access to multi-hazard early warning systems. This target recognizes that timely and accurate warnings are essential for saving lives and reducing property damage. By improving these systems and ensuring they reach everyone, particularly in developing nations, the framework aims to enhance global preparedness and significantly decrease the number of people affected by natural and human-made disasters by the year 2030.

208. (B) Public sphere
When a community forum debates government resettlement policies, it is functioning as a public sphere. This open arena for dialogue allows citizens to participate in disaster governance and hold officials accountable for their decisions. By fostering transparent and democratic deliberation, the public sphere ensures that policies are responsive to the actual needs and concerns of the affected people. This engagement is vital for ensuring that disaster recovery and reconstruction are equitable and supported by the community.

209. (B) Social justice challenge

Click Here to Buy book on Amazon

180. (B) I, II and III
Desirable outcomes of media advocacy for disaster management include increased public awareness, improvements in building codes, and greater government accountability. These results contribute to a more informed and safe society by pressuring authorities to act and educating citizens on preparedness. In contrast, suppressing information is harmful to public safety. Constructive media involvement ensures that disaster risk reduction remains a priority and that the public has the knowledge and systems necessary to withstand hazards and recover effectively.

181. (C) It ensures that the final plan has the commitment of all major groups.
A consensus-based approach is preferred in community-based disaster risk reduction because it ensures that the final plan has the commitment of all major groups. By involving stakeholders in negotiation and shared decision-making, this process builds trust and collective ownership. When everyone agrees on the path forward, implementation is more likely to be successful and sustainable. Consensus ensures that the concerns of diverse populations are addressed, leading to a more inclusive and widely supported safety strategy.

182. (B) A functioning public sphere.
A community forum where citizens question the mayor about city preparedness is an example of a functioning public sphere. This open arena for dialogue allows the public to hold officials accountable and participate in decision-making. By fostering transparency and democratic debate, the public sphere ensures that disaster management plans are responsive to actual needs and concerns. This engagement is vital for ensuring that safety policies are transparent, effective, and prioritize the protection of all city residents equitably.

183. (D) A social justice and gender-specific challenge.
Providing separate and safe sanitation for women in shelters is a critical measure to address social justice and gender-specific challenges. During disasters, women face unique vulnerabilities and privacy needs that must be respected and protected. Ensuring these facilities are available prevents additional harm and ensures that the disaster management process is equitable. Addressing gender-specific requirements is essential for a safe and inclusive response that protects the dignity and well-being of all survivors regardless of their gender.

NODIA

184. (A) Resilience
Resilience is the ability of a community system to absorb and recover from hazard impacts while positively adapting and transforming its structures. It encompasses not just survival but also the capacity to learn from events and build back stronger. A resilient community possesses the social, economic, and institutional strength to manage shocks and maintain essential functions. By focusing on adaptation, resilience ensures that the community reduces future vulnerabilities and becomes better prepared for subsequent environmental or man-made challenges.

185. (B) P-2, Q-4, R-1, S-3
Local institutions have specific disaster management functions. Gram Sabhas approve village-level plans, while City Municipal Corporations enforce urban by-laws. Local NGOs are effective at implementing livelihood support for victims, and community youth clubs often organize volunteer teams for search and rescue. This multi-layered approach ensures that different needs are met by the institutions best positioned to handle them, resulting in a more organized and comprehensive localized strategy for disaster risk reduction and response.

186. (A) Non-structural mitigation and preparedness.
Enhancing disaster literacy among community members is a form of non-structural mitigation and preparedness. It focuses on using education and awareness to reduce risks, rather than physical construction. By teaching people how to understand hazards and follow safety protocols, this strategy builds individual and collective capacity to handle emergencies. Non-structural measures are highly cost-effective and essential for ensuring that citizens can take the correct life-saving actions when a disaster strikes, regardless of infrastructure.

187. (D) The affected community itself.
The first and most immediate responders to any disaster are almost always the members of the affected community itself. Because they are on

the scene when a hazard occurs, their actions in the critical initial minutes are vital for saving lives. They provide search, rescue, and first aid using their local knowledge and immediate resources. This spontaneous response is essential before professional external agencies can arrive, making community capacity a key factor in reducing casualties during any emergency.

188. (B) Their primary function is to conduct foreign policy.
Panchayati Raj Institutions and Urban Local Bodies are responsible for preparing local disaster plans, identifying vulnerable populations, and enforcing land-use regulations. These are essential grassroots governance roles. However, conducting foreign policy is not a function of these local institutions; it is the responsibility of the national government. Local bodies focus on administrative tasks and service delivery within their jurisdiction, ensuring that disaster risk reduction is integrated into local development and community protection.

189. (C) Passing and gazetting new national laws.
NGOs play a vital role in advocacy, capacity building, and providing specialized technical support like psychosocial care during disasters. They bridge the gap between communities and government agencies. However, they do not have the legal power to pass or gazette new national laws; that is a sovereign legislative function of the government. NGOs contribute to law-making by advocating for changes, but the formal creation and enforcement of statutes remain strictly with the state and its institutions.

190. (A) Both A and R are true and R is the correct explanation of A.
The Sendai Framework emphasizes investing in disaster risk reduction for resilience as a critical strategy. Structural measures like retrofitting and non-structural measures like public awareness are vital investments that minimize future losses. By allocating resources to these proactive steps, nations and communities enhance their ability to cope with hazards and recover more quickly. Such investments protect development gains and are far more cost-effective than the enormous expense of post-disaster response and reconstruction.

191. (A) The level of people's participation.
The success of community-based disaster risk reduction heavily depends on the level of people's participation. When residents are actively involved in assessing their own risks and developing safety plans, they provide valuable local knowledge and develop a sense of ownership. This engagement ensures that risk reduction strategies are contextually appropriate and sustainable. High participation levels empower the community to take charge of its safety, leading to more effective and lasting improvements in collective resilience against various hazards.

192. (B) Monitoring government actions for transparency, effectiveness, and equity.
In disaster management, the watchdog role of civil society organizations involves monitoring government actions for transparency, effectiveness, and equity. These organizations ensure that public funds are used correctly and that relief and recovery reach all sections of society fairly. By scrutinizing official policies and identifying gaps in response, they hold authorities accountable for their performance. This oversight is vital for maintaining public trust and ensuring that disaster management systems are responsive and inclusive for the entire population.

193. (B) Community owned action plan for risk reduction.
The primary output of a participatory risk assessment is a community-owned action plan for risk reduction. This document is based on the localized data collected by residents themselves and identifies specific steps to mitigate hazards and enhance safety. Because the plan is created by the community, it gains broad acceptance and commitment. It serves as a practical roadmap for local disaster management, ensuring that risk reduction initiatives are grounded in reality and maintained by the people they protect.

194. (A) Integrated into all aspects of life, from home to workplace to community.
A culture of safety means that disaster awareness and protective measures are integrated into every aspect of life, from the home to the workplace. It involves a shift in mindset where individuals and communities routinely consider safety in their daily decisions and activities. By making risk reduction a standard practice, society becomes

Downloaded from www.pdf.tube

more proactive and resilient. This comprehensive approach ensures that the impact of hazards is minimized through constant readiness and a shared responsibility for collective well-being.

195. (D) All I, II, III, IV and V
Community Based Disaster Risk Reduction involves a wide range of actors including the local community, PRIs, NGOs, civil society, and the media. Each entity plays a specific role in enhancing resilience, from identifying local hazards to advocacy and disseminating early warnings. This collaborative and multi-stakeholder approach ensures that risk reduction is comprehensive and addresses the diverse needs of the population. By working together, these entities build a stronger, more informed, and better-prepared environment for all citizens.

196. (D) The vulnerabilities and weaknesses of the community.
Community assets include physical buildings, financial savings, human skills, and intangible social capital like trust and networks. These are the internal strengths that a community can leverage to reduce risk and respond to disasters. Vulnerabilities and weaknesses are the opposite of assets; they are the factors that increase the risk of harm. Identifying both is necessary for planning, but assets specifically refer to the positive resources available to build resilience and enhance community safety.

197. (C) Risk is a dynamic condition that needs to be continuously managed.
The paradigm of living with risk acknowledges that risk is a dynamic and changing condition that requires continuous management. It rejects the idea that all hazards can be completely eliminated or that communities should be fatalistic. Instead, it emphasizes the importance of ongoing risk assessment, adaptation, and proactive safety measures. By accepting risk as a part of life, society can better prepare for potential hazards and implement sustainable strategies that protect lives and livelihoods over time.

198. (B) Building consensus
Resolving a conflict over relief distribution through a collaborative process involving all groups is a prime example of building consensus. This approach focuses on negotiation and mutual agreement to ensure that resources are shared fairly and transparently. By reaching a consensus, the community avoids social division and ensures that everyone's basic needs are addressed with dignity. This cooperative process strengthens the social fabric and builds trust, which is essential for a successful and cohesive recovery after a disaster.

199. (D) Social justice
Ensuring that disaster warnings are communicated in local dialects and are accessible to people with disabilities is an issue of social justice. Disasters impact marginalized groups more severely if communication systems are not inclusive. By prioritizing accessibility and cultural relevance, disaster management becomes equitable and protects the rights of all citizens to receive life-saving information. Addressing these barriers is essential for an inclusive safety strategy that ensures no one is left behind during a hazard event or emergency.

200. (A) Both Statement I and Statement II are correct, and Statement II is the correct explanation of Statement I.
Community resilience is significantly bolstered through the strengthening of social capital, which encompasses the trust, networks, and shared norms found within a society. These intangible resources facilitate coordinated action and mutual support, allowing communities to organize effectively during a crisis. Strong social capital ensures that vulnerable members receive help and that collective recovery efforts are more efficient, demonstrating that the social fabric of a community is as vital as its physical infrastructure for surviving and bouncing back.

201. (C) The local Panchayati Raj Institution
The local Panchayati Raj Institution has the primary governance role in implementing disaster risk reduction strategies at the village level. These bodies are responsible for local planning, coordinating resources, and managing community-based initiatives. Their formal status as a local self-government allows them to integrate risk reduction into rural development and administration. By utilizing their local authority and community ties, PRIs ensure that disaster management is responsive to the specific needs and vulnerabilities of the rural population.

NODIA

143. (A) Continuous education, awareness, and integration into daily life.
A culture of prevention is best promoted through continuous education, awareness, and the integration of safety measures into daily life. It requires a long-term commitment to changing societal behaviors and prioritizing risk reduction. By making safety a core value, communities can move away from reactive attitudes and focus on avoiding losses before hazards occur. This ongoing process builds a more resilient society where every citizen takes responsibility for their collective protection.

144. (B) Community members walking through their village with facilitators to observe, discuss, and map risks and resources.
A transect walk in a participatory risk assessment involves community members walking through their village with facilitators to observe and discuss hazards and resources. This hands-on exercise allows residents to share local knowledge and identify specific areas of risk that may not be apparent on satellite maps. The direct observation of the environment fosters a shared understanding of safety needs and provides localized data essential for developing a practical community disaster management plan.

145. (B) I, II, III, and IV
Positive components of community resilience include a diversified local economy, effective local governance, well-maintained infrastructure, and strong social cohesion. These factors together enhance the collective capacity of a community to withstand and recover from hazards. Relying completely on external support is not a component of resilience, as it weakens local self-reliance. True resilience is built on the strength and preparedness of the community's own social, economic, and institutional systems.

146. (A) It facilitates cooperation, collective action, and mutual help, which are vital in a crisis.
Social wealth is a crucial community asset because it facilitates cooperation and mutual help during a crisis. It consists of the intangible bonds of trust and networks that allow a community to organize effectively. In times of disaster, these social resources are vital for collective action, such as shared rescue efforts or community-run support systems. Strong social capital ensures that no individual is left alone, making the entire community more resilient.

147. (C) Managing disaster risk.
The Sendai Framework for Disaster Risk Reduction calls for a fundamental shift from managing disasters toward managing disaster risk. This proactive approach focuses on understanding and reducing the underlying causes of vulnerability before a hazard event occurs. By prioritizing risk management, the framework aims to minimize future losses and move beyond reactive response. This global strategy encourages nations to invest in resilience and strengthen governance to prevent hazards from becoming catastrophic events.

148. (D) Is acceptable to all key stakeholder groups, even if it is not their ideal choice.
A consensus-based decision is one that all key stakeholder groups can support, even if it is not their perfect choice. It is reached through inclusive dialogue and negotiation, ensuring that various perspectives are considered. This approach builds broad commitment and reduces future conflicts, making the final outcome more sustainable. In disaster planning, consensus ensures that the community is united in its support for safety measures, enhancing the overall effectiveness of implementation.

149. (C) Allowing citizens and media to scrutinize government actions and demand accountability.
The public sphere acts as a check on power by allowing citizens and the media to scrutinize government actions and demand accountability. This open arena for debate ensures that disaster management policies are transparent and socially responsive. By questioning the effectiveness of safety measures and reporting on gaps in preparedness, the public sphere pressures authorities to improve their performance and ensures that the needs of the population are prioritized in governance.

150. (B) Aid distribution points being set up only in affluent areas.
Setting up aid distribution points only in affluent areas is a significant social justice challenge in disaster response. This discriminatory practice ignores the needs of marginalized populations who are often the most severely affected and have

Click Here to Buy book on Amazon

The disproportionate impact of disasters on women, children, the elderly, and the poor is a central social justice challenge. These groups often have higher vulnerabilities and fewer resources to cope with hazard events. Addressing this inequality requires that disaster management plans prioritize their specific needs and provide equitable protection. Ensuring social justice means that disaster risk reduction efforts are designed to protect the most marginalized, preventing disasters from exacerbating existing socioeconomic divides within a society.

210. (A) P-3, Q-2, R-4, S-1
Disaster management concepts are seen in various community actions. Planting mangroves is a mitigation measure to reduce storm impacts. Preparing evacuation plans is a part of preparedness, ensuring readiness before a hazard event. People helping each other during a crisis reflects social wealth and the community's role as a first responder. Conversely, unequal aid distribution represents a social justice challenge. These examples show how different principles and problems manifest in real-world disaster risk reduction and response.

211. (C) Increasing the coping capacities of the community members and institutions.
The most fundamental aspect of building community resilience is increasing the coping capacities of members and local institutions. This involves strengthening the social, economic, and institutional systems that allow the community to withstand hazards and recover effectively. Rather than just physical infrastructure, true resilience depends on the readiness, skills, and cooperation of the people. By enhancing local capacities, the community reduces its vulnerability and becomes better equipped to manage environmental and man-made challenges on its own.

212. (D) Most residents can explain what the different cyclone warning signals mean and what action to take for each.
High disaster literacy is best demonstrated when residents can correctly interpret warning signals and know exactly what actions to take. This practical knowledge allows individuals to respond effectively to an impending hazard, such as a cyclone. While knowing past history is useful, the ability to act upon current warnings is what saves lives. Disaster literacy transforms citizens from passive observers into informed participants who can proactively protect themselves and their families during critical emergency situations.

213. (B) External help often takes time to arrive, and immediate action saves lives.
The role of the community as a first responder is critical because external professional help often takes time to reach a disaster site. Immediate actions such as search, rescue, and first aid performed by residents can save lives during the golden hour after a hazard strikes. Since community members are already on the scene, their ability to organize a rapid response is essential for minimizing casualties and providing urgent care before larger state or national agencies arrive.

214. (B) Gram Panchayat/Village Disaster Management Committee
The preparation of a Village Disaster Management Plan is the key responsibility of the Gram Panchayat and the Village Disaster Management Committee. These local bodies are best positioned to identify localized risks and capacities. By leading the planning process, they ensure that the resulting strategy is contextually appropriate and supported by the community. Integrating disaster management into village-level governance makes safety measures more responsive and sustainable, ensuring that the rural population is better prepared for potential hazards.

215. (A) Both A and R are true and R is the correct explanation of A.
Non-Governmental Organizations play a crucial supplementary role by using their strong community links and operational flexibility. They can fill gaps in government response by focusing on marginalized populations and implementing programs that address specific local needs. This participatory approach ensures that disaster management is more inclusive and reaches those who might otherwise be left behind. Their role in advocacy and capacity building empowers communities to take charge of their own safety and build long-term resilience.

216. (A) A community passively waiting for relief distribution.

Downloaded from www.pdf.tube

275. (C) advocating for a people-centered approach that leverages local knowledge.
The Sendai Framework aligns with community-based disaster management by promoting people-centered strategies that are inclusive and localized. It explicitly calls for leveraging local and indigenous knowledge to create risk reduction plans that fit specific geographic and social contexts. By empowering communities and fostering their active participation, the framework supports the fundamental tenets of resilience-building at the grassroots level.

276. (A) Due to resource scarcity and inequitable distribution of aid.
Post-disaster environments are often characterized by extreme resource scarcity and competing needs among affected populations. These pressures, combined with the potential for inequitable aid distribution and the breakdown of normal social structures, frequently lead to significant tension. Conflicts can arise between community groups or between residents and external agencies as they struggle to navigate the difficult process of recovery and survival.

277. (D) Fostering collaboration and building consensus among stakeholders.
The most sustainable way to resolve disputes in disaster management is through building consensus and encouraging open collaboration. By establishing platforms where stakeholders can communicate their grievances and needs, communities can negotiate solutions collectively. This approach avoids top-down impositions and ensures that relief and recovery plans are mutually agreeable. Such cooperative processes are essential for maintaining harmony during the complex rehabilitation phase.

278. (B) find mutually agreeable plans through collective negotiation.
A consensus-based approach in disaster recovery focuses on finding common ground through structured dialogue and collective negotiation. Rather than allowing one group to dominate, this method seeks to develop plans for relief and reconstruction that all stakeholders can support. By ensuring that diverse perspectives are heard and addressed, this process creates more equitable outcomes and reduces the likelihood of long-term social friction.

279. (C) It strengthens social cohesion and trust within the community.
Beyond resolving immediate disputes over resources, collaborative processes in disaster recovery provide lasting benefits to a community's social fabric. Engaging in shared decision-making and negotiation fosters trust and strengthens social cohesion among members. These social bonds are vital components of resilience, as they improve the community's ability to work together effectively during future challenges and long-term development efforts.

280. (D) creating an opportunity to strengthen community social bonds.
Conflict resolution in disaster management serves as more than just a dispute management tool; it acts as an opportunity for social reinforcement. By navigating the challenges of recovery through mutual respect and shared governance, communities can actually turn potential divisions into a source of strength. This process of building consensus helps solidify social bonds, ensuring a more unified and resilient response to future risks.

281. (A) To provide a structured space for public voices to be articulated to authorities.
Citizens' Forums serve as essential platforms within the public sphere that allow community members to engage directly with authorities. Their primary function is to provide a structured environment where residents can articulate their specific needs, concerns, and priorities regarding disaster management. This transition from passive observation to active participation ensures that public voices are integrated into local governance and decision-making processes.

282. (B) disseminating information and serving as a tool for advocacy.
The media performs two critical functions in the context of disaster management. First, it acts as a primary channel for disseminating essential information, such as early warnings and safety guidelines, to the public. Second, it serves as a powerful instrument for advocacy, highlighting systemic failures and community successes. This dual role supports both immediate emergency response and long-term policy improvements.

NODIA

censored and public participation is discouraged. An open arena for debate is essential for holding authorities accountable and ensuring that policies are transparent. When citizens are prevented from voicing their concerns or questioning the effectiveness of safety measures, disaster management becomes less responsive and inclusive. Protecting the public sphere is vital for maintaining a healthy and democratic system of risk reduction that serves all sections of society.

224. (B) Identifying the different vulnerabilities and capacities of various social groups.
To address social justice challenges, a planner must begin by identifying the different vulnerabilities and capacities of various social groups. Disasters do not affect everyone equally, and marginalized populations often face higher risks due to socioeconomic factors. By understanding these diverse needs, disaster management can prioritize the most vulnerable and ensure that aid and protective measures are distributed equitably. This inclusive approach is essential for reducing pre-existing social inequalities and building a more just and resilient community.

225. (B) II, III, I, IV
For an impending cyclone, the logical sequence of action begins with monitoring official warnings and information. Residents should then secure their houses and prepare emergency kits. Once directed, they must evacuate to designated safe shelters for protection during the event. Finally, after the hazard has passed, community members participate in post-cyclone clean-up and recovery efforts. This organized approach ensures individual safety and facilitates a faster collective return to normalcy by following established emergency protocols and plans.

226. (A) Actively campaigning for policy change, awareness, and accountability.
Media advocacy goes beyond simple reporting by actively campaigning for policy change, public awareness, and governmental accountability. By using its platform to highlight systemic gaps in disaster management, the media pressures authorities to improve safety standards. Advocacy also involves educating the public on preparedness and highlighting the specific needs of vulnerable populations. This proactive role ensures that disaster risk reduction remains a high priority for society and that the public is better informed to handle hazards effectively.

227. (C) Withstand and recover from a disaster event effectively, and potentially be strengthened by the experience.
A resilient community is one that can withstand and recover from disaster events effectively. Beyond just survival, resilience involves the capacity to adapt and potentially become stronger by learning from the experience to reduce future vulnerabilities. This requires a combination of strong social networks, diversified economic resources, and effective local institutions. A resilient society maintains essential functions during a crisis and bounces back through a collaborative effort that enhances its long-term safety and collective well-being.

228. (D) Reduce risk-taking behavior by making people aware of consequences and safety measures.
A key goal of promoting disaster literacy is to reduce risk-taking behavior by making people aware of hazard consequences and safety measures. When individuals understand the potential impacts of their actions, they are more likely to make safer choices. Literacy empowers citizens with the knowledge to protect themselves and follow early warnings. By fostering an informed population, communities can significantly minimize loss of life and property, as citizens take personal responsibility for their safety and preparedness.

229. (C) A mechanism for community participation and local governance in DM.
A Village Disaster Management Committee serves as a vital mechanism for community participation and local governance in disaster management. It facilitates the involvement of residents in assessing risks and developing safety plans at the grassroots level. By operating within the community, these committees ensure that disaster risk reduction is integrated into everyday life and local decision-making. This localized structure makes safety initiatives more responsive and ensures that the rural population is actively engaged in building their own resilience.

230. (B) I, III and IV

Click Here to Buy book on Amazon

Framework, which focuses on understanding disaster risk. Knowledge and awareness are fundamental for individuals and institutions to assess their vulnerabilities and take appropriate safety actions. By educating the population about hazards and preparedness, society builds the foundation for effective risk management. Understanding the nature of risks is the first essential step toward strengthening governance and investing in resilience at all levels of society.

245. (A) I, II, III and V
Valid risk reduction strategies include building social cohesion, implementing building codes, creating diversified livelihoods, and promoting public awareness. These measures collectively strengthen a community's ability to withstand and recover from hazards. Ignoring scientific warnings is a dangerous practice that increases vulnerability. Effective disaster management requires a combination of social, administrative, and economic strategies that address the root causes of risk and enhance the collective preparedness and resilience of the entire population against various environmental hazards.

246. (B) Gram Panchayat
The institutional responsibility for ensuring clean drinking water and sanitation in a village lies with the Gram Panchayat. These essential services are critical for maintaining public health, particularly after a disaster when the risk of waterborne diseases increases. By managing local infrastructure and hygiene, the Gram Panchayat plays a vital role in both preparedness and recovery. Local oversight ensures that these life-saving resources are maintained and available to the community, protecting residents from secondary health crises.

247. (D) Community-led
The most defining characteristic of Community Based Disaster Risk Reduction is that it is a community-led process. This approach prioritizes the involvement and leadership of residents in identifying their own risks and developing safety plans. By empowering the community as the primary actor, CBDRR ensures that disaster management is grounded in local reality and utilizes indigenous knowledge. This local ownership makes risk reduction initiatives more relevant, socially sustainable, and effective in protecting the population from environmental and human-made hazards.

248. (A) The community's response capacity.
A volunteer organization that trains community members in first aid and search and rescue is directly contributing to the community's response capacity. This initiative ensures that residents have the practical skills necessary to act immediately when a disaster strikes. By building local expertise, such programs reduce reliance on external aid in the critical initial hours after a hazard strikes. Increasing local response capacity is a fundamental strategy for saving lives and minimizing injuries within the community during any emergency event.

249. (C) "An ounce of prevention is worth a pound of cure."
The concept of a culture of prevention is best summarized by the principle that taking early action is far more effective than dealing with the aftermath of a catastrophe. This proactive approach prioritizes systematic risk reduction and preparedness over reactive response measures. By instilling these values within a society, the potential impact of disasters is minimized, saving lives and resources through foresight and planning. It emphasizes that a resilient society focuses on avoiding losses before hazards result in catastrophic outcomes.

250. (A) Help the community analyze its own vulnerabilities and temporal risk patterns.
Participatory methods like social mapping and seasonal calendars are used in CBDRR to help communities analyze their own vulnerabilities and temporal risk patterns. These tools allow residents to visualize where hazards are located and when they are most likely to occur throughout the year. By identifying these patterns collectively, the community can prioritize mitigation actions and develop realistic preparedness plans. This shared analysis fosters a deep understanding of local risks and empowers residents to take charge of their safety.

251. (B) PRIs/ULBs operate as formal governmental bodies with administrative duties, while NGOs function with greater flexibility and community focus.

NODIA

Ongoing assessment allows for the adjustment of safety plans and mitigation measures to remain effective over time. This persistent focus on risk ensures that society remains vigilant and prepared, moving away from static planning toward a more adaptive and resilient disaster management framework.

238. (D) Having clear policies, institutions, and budgets for DRR at all levels.
Strengthening disaster risk governance, as emphasized in Priority 2 of the Sendai Framework, involves having clear policies, effective institutions, and dedicated budgets for risk reduction at all levels. This structured approach ensures that disaster management is a high priority and is integrated into mainstream governance. By establishing formal frameworks and securing financial resources, nations can manage risks more systematically and accountably, leading to a significant reduction in disaster impacts and a more resilient overall society.

239. (A) Ensuring that reconstruction efforts do not recreate or worsen pre-existing vulnerabilities and inequalities.
The most significant social justice challenge during reconstruction is ensuring that efforts do not recreate pre-existing vulnerabilities or inequalities. Rebuilding should aim to improve the conditions of the most marginalized populations, rather than just restoring the status quo. This involves ensuring equitable access to resources and incorporating safety improvements that benefit all community sections. By focusing on building back better and fairer, the recovery process can lead to long-term social improvements and more equitable disaster resilience.

240. (A) Both A and R are true and R is the correct explanation of A.
The role of the community is paramount because it is the first to be affected by any hazard and the first to respond. The initial actions taken by residents in the critical moments of a disaster are essential for saving lives before professional help can arrive. Enhancing community capacity and involvement ensures a more rapid and effective response. Recognizing the community as a vital actor is fundamental to reducing disaster impacts and building a safety-conscious and prepared society.

241. (B) Democratic and accountable disaster governance.
A public sphere where citizens can freely debate disaster-related policies contributes significantly to democratic and accountable governance. This open dialogue ensures that the concerns of the public are heard and that decision-makers are held responsible for the effectiveness of safety measures. By fostering transparency and inclusive participation, the public sphere helps to create disaster management plans that are socially responsive and supported by the people. Democratic engagement is vital for building trust and ensuring that risk reduction protects everyone.

242. (A) Highlighting gaps in preparedness and response, and showcasing public suffering.
Media advocacy can build pressure on authorities by highlighting gaps in preparedness and response while showcasing public suffering during disasters. This visibility forces decision-makers to address systemic failures and improve the delivery of relief and recovery services. By acting as a voice for the affected population, the media ensures that the impacts of disasters are not ignored. This role is essential for promoting accountability and ensuring that disaster risk reduction remains a high priority for the government.

243. (C) Safeguard development gains and human well-being.
The ultimate aim of building disaster resilience is to safeguard development gains and protect human well-being. Disasters can undo years of economic and social progress in a matter of moments. By increasing the capacity of society to withstand and recover from hazards, nations can ensure that development remains sustainable. Resilience protects lives, infrastructure, and livelihoods, creating a stable environment where communities can thrive despite the challenges posed by potential natural or human-made environmental threats and disasters.

244. (D) Priority 1: Understanding disaster risk.
Improving a community's disaster literacy is a key component of Priority 1 of the Sendai

Downloaded from www.pdf.tube

259. (C) Safety becomes a shared community value and collective practice.
Establishing a sustainable culture of safety requires embedding prevention and preparedness into the social fabric of a community. Rather than being an externally imposed mandate, safety must evolve into a shared value and collective practice among members. When these principles are internalized, the intrinsic resilience of the population increases, allowing for better recovery and resistance to future shocks.

260. (A) Active participation is a key mechanism for enhancing community resilience.
Active engagement in disaster risk reduction processes directly strengthens the ability of a community to withstand and recover from external shocks. By participating in planning and implementation, community members foster a sense of ownership and collective responsibility. This participatory approach serves as a fundamental mechanism that enhances intrinsic resilience, transforming the community into an organized and capable actor.

261. (D) To recognize and utilize the indigenous knowledge of local communities.
Participatory risk assessment methods operate on the understanding that local populations possess unique and invaluable knowledge about their specific environment. Unlike top-down approaches, these methods prioritize indigenous insights regarding local hazards, vulnerabilities, and strengths. Utilizing this internal expertise ensures that risk analysis is accurate and reflects the actual lived experiences and historical memory of the community involved.

262. (B) Community risk mapping.
Participatory risk assessment utilizes various localized tools to identify hazards and resources through direct community involvement. Techniques like mapping allow residents to visually identify dangerous areas, safe zones, and critical infrastructure. Other common methods include transect walks for observation, seasonal calendars for timing hazards, and vulnerability analysis. These tools ensure that disaster risk reduction plans remain practical and culturally appropriate.

NODIA

263. (C) empowers communities and fosters ownership of DRR plans.
The process of involving local residents in risk assessment serves as a powerful empowering tool that increases awareness and commitment. It shifts the focus from mere information gathering to creating a strong sense of community ownership over disaster management strategies. Consequently, the resulting plans are more likely to be relevant and practical because they are developed by those directly affected.

264. (D) To facilitate a structured and inclusive dialogue within the community.
Volunteer organizations play a crucial role in managing the dialogue between different sections of a community during risk assessments. They act as facilitators who ensure that the process remains structured, inclusive, and representative of all groups. This involvement helps bridge gaps between various community stakeholders, leading to a more comprehensive and accurate understanding of local vulnerabilities and existing capacities.

265. (A) community members systematically walking through their area to observe and discuss risks.
A transect walk is a hands-on participatory method where community members and facilitators move systematically through a designated geographic area. This exercise allows participants to observe local hazards first-hand and discuss vulnerabilities in real-time. By walking the terrain together, they can pinpoint specific risks, identify available resources, and exchange knowledge about the environment, making the assessment process highly interactive.

266. (B) The networks of trust, local leadership, and collective action.
Social wealth represents the intangible assets that bind a community together and facilitate coordinated responses to hazards. It encompasses networks of trust, reciprocity, and established local leadership that enable collective action during crises. This social capital is just as vital as physical infrastructure, as it defines the community's internal strength and its ability to mobilize resources effectively for recovery.

267. (B) To visualize hazards in relation to both physical and social community assets.

Panchayati Raj Institutions and Urban Local Bodies function as constitutional entities of local self-government with formal administrative mandates. In contrast, Non-Governmental Organizations operate with significant flexibility and possess deep inroads into vulnerable populations. This structural difference allows formal bodies to handle governance while adaptive organizations focus on mobilization, capacity building, and ensuring inclusive disaster management.

252. (A) Integrating disaster management plans into broader developmental planning.
Constitutional bodies of local self-government bear the formal task of overseeing disaster management at the grassroots level. Their primary responsibilities include merging disaster management strategies into broader developmental planning, managing financial resource allocation, and enforcing safety regulations. This systematic integration ensures that disaster risk reduction becomes a core component of long-term local infrastructure and social development.

253. (C) combines administrative authority with grassroots community engagement for comprehensive action.
Successful local governance for disaster risk management depends on the synergy between different institutional approaches. By uniting the formal administrative machinery of local government with the community-centric methodology of non-governmental entities, a resilient framework is established. This partnership bridges the gap between official policy execution and last-mile service delivery, ensuring that relief and rehabilitation are effective.

254. (D) Fragmented efforts and inefficient use of resources.
The failure of local institutions to work in a coordinated manner severely impacts the efficacy of the disaster management cycle. Without proper synergy between various stakeholders, efforts often become fragmented, leading to significant gaps in essential service delivery. This lack of collaboration causes a duplication of resources and undermines the overall resilience of the local governance framework.

255. (C) Acting as advocates to ensure their inclusion and representation.
Non-Governmental Organizations serve as vital intermediaries that represent the specific needs of vulnerable populations during disaster cycles. Their role extends beyond service delivery to include advocacy, ensuring that marginalized groups are actively included in management processes. By leveraging their deep community connections, these organizations help prevent exclusion and promote social justice within local disaster governance structures.

256. (B) Communities should be central actors in their own disaster risk reduction.
The modern paradigm for reducing community vulnerability emphasizes moving away from top-down aid models toward active engagement. In this framework, local populations transition from being passive recipients of assistance to becoming the primary drivers of their own safety. Directly involving community members in planning, assessment, and monitoring ensures that disaster risk reduction strategies are grounded in reality.

257. (D) To act as facilitators that empower communities to participate.
Civil society and volunteer organizations function as critical catalysts that enable broader participation in disaster risk reduction activities. They provide the necessary facilitation to empower communities with essential knowledge, technical skills, and organizational capacity. This supportive role helps local populations take charge of forming committees, conducting drills, and developing the resources required for effective long-term resilience.

258. (A) Drafting national-level disaster management legislation.
Community-based disaster risk reduction focuses on localized initiatives that foster collective responsibility and ownership. Activities such as forming management committees, conducting awareness drills, and maintaining resource inventories are typical grassroots actions. In contrast, drafting national-level legislation is a centralized governmental function that occurs far beyond the scope of direct community-level participation and localized implementation strategies.

Click Here to Buy book on Amazon

People's participation involves active engagement in risk reduction, such as identifying evacuation routes or constructing protective infrastructure. Activities like women's groups managing early warning systems show the power of community involvement. In contrast, passively waiting for relief is not an example of participation; it reflects dependency. Effective disaster risk reduction requires citizens to be proactive partners in assessing hazards, planning for safety, and taking collective action to reduce their overall vulnerability to potential disasters.

217. (C) The routine practice of clearing drainage channels before the monsoon season.
A culture of prevention is best demonstrated by routine proactive measures like clearing drainage channels before the rainy season. This habitual action reduces the risk of flooding by ensuring that the local infrastructure functions correctly. It reflects a societal mindset that prioritizes long-term safety over reactive responses. By making such mitigation activities part of regular life, communities can significantly minimize the impact of hazards and protect their property and lives through foresight and shared responsibility.

218. (A) Generates plans that are owned by the community.
The primary advantage of participatory risk assessment is that it generates plans that are truly owned by the community. By involving residents in identifying hazards and vulnerabilities, the resulting disaster management strategy reflects local reality and priorities. This sense of ownership ensures that the community is more committed to implementing and maintaining safety measures. Participation also builds local capacity and ensures that risk reduction efforts are culturally appropriate and sustainable over the long term for the population.

219. (D) They are synonymous with community vulnerabilities.
Community assets include social capital, human skills, financial resources, and physical infrastructure. These are the internal strengths that a community can build upon for disaster risk reduction. Indigenous knowledge is also a key asset. However, assets are not synonymous with vulnerabilities; vulnerabilities are the weaknesses that increase risk. Distinguishing between the two is essential for effective planning, as disaster management aims to utilize assets to address and reduce vulnerabilities, thereby enhancing collective resilience.

220. (D) All I, II, III, IV and V are correct.
Various institutions have clearly defined and correct roles in disaster management. The community acts as the first responder, while local bodies like PRIs and ULBs enforce building codes. Non-Governmental Organizations provide advocacy and supplementary aid, and the media disseminates timely warnings. Additionally, civil society acts as a watchdog to ensure government accountability. Together, these different actors create a comprehensive and coordinated disaster management system that addresses all phases of risk reduction and response.

221. (C) The actions of states, local governments, and other stakeholders at all levels.
The Sendai Framework for Disaster Risk Reduction is intended to guide the actions of states, local governments, the private sector, and other stakeholders at all levels. It promotes an all-of-society approach to managing and reducing disaster risks. By providing a common global framework, it encourages collaboration across different sectors to build resilience and minimize mortality and economic losses. This inclusive strategy recognizes that every part of society has a role to play in creating a safer and more prepared world.

222. (D) Collaborative and consensus-based planning
Developing a disaster plan through meetings where all sections of the community voice their concerns and reach an agreement is called collaborative and consensus-based planning. This inclusive process ensures that the final strategy reflects diverse priorities and has broad local support. By building agreement through negotiation, the community ensures that its risk reduction efforts are sustainable and that everyone is committed to the plan. This approach strengthens social bonds and leads to more effective and equitable disaster management.

NODIA

223. (A) Information is censored and public participation is discouraged.
The public sphere for disaster governance is significantly weakened when information is

Community risk mapping serves as a practical visualization tool that links potential hazards with specific local resources. By identifying the location of physical infrastructure alongside social assets like trained rescue teams, the map provides a comprehensive overview of risk and capacity. This holistic view enables communities to develop protective strategies that leverage their existing strengths while addressing their most significant vulnerabilities.

268. (A) managing unavoidable risks by strengthening their capacities and assets.
The concept of living with risk acknowledges that it is impossible to eliminate every potential hazard from an environment. Instead of seeking complete elimination, this philosophy focuses on managing unavoidable threats by enhancing community strengths. By reinforcing social wealth and physical assets, communities improve their capacity to cope with shocks and recover efficiently, making risk management a continuous, realistic process.

269. (C) The presence of a trained volunteer rescue team.
Community assets encompass a broad range of physical, economic, natural, and social resources available for disaster management. While infrastructure and land are essential, social assets like trained volunteer rescue teams are equally critical. These human resources provide the skills and organization necessary to respond to hazards effectively. Identifying such assets helps communities visualize their internal capacity to manage and mitigate risks.

270. (D) identifying and strengthening both assets and social wealth to manage risks.
Achieving a holistic perspective in risk management involves looking beyond hazards to understand a community's full range of capabilities. This requires evaluating physical infrastructure alongside social capital, such as leadership and trust networks. By strengthening both tangible assets and social wealth, a community creates a robust foundation for managing risks, enhancing its overall ability to absorb and recover from disasters.

271. (C) A shift from focusing on disaster response to a comprehensive emphasis on managing risk.
The Sendai Framework represents a significant evolution in global disaster policy by prioritizing risk management over traditional emergency response. This shift emphasizes proactive measures to reduce vulnerabilities before disasters strike, rather than solely reacting after they occur. By focusing on comprehensive risk reduction, the framework encourages nations and communities to invest in long-term resilience strategies that minimize the overall impact of hazards.

272. (B) Investing in disaster risk reduction for resilience.
The Sendai Framework establishes four specific priorities to guide global disaster risk reduction efforts through 2030. One fundamental priority is investing in disaster risk reduction to build resilience, which involves allocating resources toward measures that prevent new risks and reduce existing ones. This proactive investment is crucial for enhancing the ability of communities and nations to withstand and recover from disasters.

NODIA

273. (D) As essential partners to be included in the design and implementation of policies.
Under the Sendai Framework, communities are viewed as central stakeholders whose engagement and empowerment are essential for effective disaster management. The framework advocates for an all-of-society approach where local populations are included in the design and implementation of policies. This inclusive perspective ensures that risk reduction strategies are tailored to local contexts and leverage the invaluable knowledge held by community members.

274. (A) The recovery, rehabilitation, and reconstruction phase.
The concept of building back better is a core principle within the Sendai Framework that specifically targets the period following a disaster. It emphasizes using the recovery, rehabilitation, and reconstruction phase as an opportunity to integrate disaster risk reduction into development. This approach ensures that rebuilt infrastructure and social systems are more resilient and better prepared for future hazards than they were previously.

A community's social structure significantly influences its vulnerability, as certain groups may have less access to resources. Communities are not passive; they are the first line of defense during any disaster, providing immediate response and support. Furthermore, local and indigenous knowledge within a community is a valuable resource for effective risk reduction. Recognizing these factors is essential for building collective resilience and ensuring that disaster management strategies are grounded in the actual strengths and needs of the population.

231. (D) Urban governance, planning, and service delivery.
The primary role of an Urban Local Body in disaster management is centered on urban governance, planning, and service delivery. This includes managing infrastructure, enforcing building codes, and regulating land use to prevent development in high-risk zones. By integrating disaster risk reduction into city administration, ULBs can protect the urban population and ensure that essential services like water and drainage are resilient. Their local oversight is crucial for creating safer cities that can withstand natural and human-made hazards.

232. (A) The entire disaster management cycle.
People's participation must be integrated into the entire disaster management cycle, from risk assessment and mitigation to response and recovery. It is not a one-time event but an ongoing process that builds community capacity and ownership. By involving residents at every stage, disaster risk reduction initiatives become more effective and socially sustainable. This continuous engagement ensures that safety measures are contextually relevant and that the population is always informed and prepared to handle potential hazard impacts collectively.

233. (C) Watchdog role
When a civil society organization holds a public hearing on flood response effectiveness, it is performing its watchdog role. This action involves monitoring government performance and ensuring that public services are transparent and accountable. By providing a platform for citizens to share their experiences, these organizations highlight gaps in disaster management and pressure authorities to improve their systems. This oversight is vital for maintaining high safety standards and ensuring that the needs of the affected population are prioritized.

234. (A) Reinforcing the roof of a house to withstand high winds.
Reinforcing a roof to withstand high winds is a clear example of a community action for mitigation. This structural measure is taken to reduce the physical vulnerability of a building to future hazards like cyclones or storms. Mitigation focus on long-term actions that minimize potential damage before a disaster occurs. By participating in such improvements, residents take proactive steps to protect their property and lives, contributing to the overall resilience of the community against natural threats.

235. (B) P-4, Q-3, R-1, S-2
Community-based actions align with different phases of disaster management. Forming a volunteer task force is a preparedness activity, while cleaning drains to prevent logging is a mitigation measure. Providing first aid to the injured occurs during the immediate response phase. Finally, applying for reconstruction grants is part of the recovery process. This comprehensive approach shows how residents can take specific and important actions throughout the entire disaster cycle to enhance their safety and support long-term rebuilding efforts.

236. (B) Social capital
The concept of social wealth is most closely related to the sociological concept of social capital. Social capital refers to the networks of relationships, trust, and shared norms that enable people to work together effectively for common goals. In disaster management, these intangible social bonds are vital for mobilizing community support and organizing collective action. A community with high social capital is inherently more resilient, as members are more likely to cooperate and assist each other during a crisis.

237. (C) A dynamic and continuous process.
The living with risk approach requires that risk assessment be a dynamic and continuous process. As environments change and new hazards emerge, communities must regularly update their understanding of the risks they face.

Downloaded from www.pdf.tube

283. (C) influence policy and hold institutions accountable.
Media advocacy is a potent force in disaster management because it can shift public opinion and influence policy decisions. By giving a platform to marginalized voices and exposing gaps in the system, the media helps hold institutions accountable for their actions. This transparency encourages authorities to improve disaster risk reduction efforts, mobilize necessary resources, and ensure that management processes are responsive to community needs.

284. (A) It fosters accountability and transparency in disaster management.
When citizens actively participate in forums and public discourse, they introduce a higher level of oversight to disaster management processes. This engagement fosters greater transparency and forces institutions to be more accountable for their decisions and resource allocation. By moving away from top-down control toward a more democratic model, disaster governance becomes more responsive to the actual vulnerabilities and priorities of the population.

285. (C) a system where community perspectives are integral to policy and practice.
A vibrant public sphere, characterized by continuous dialogue between citizens, authorities, and the media, creates a more democratic disaster management system. This environment ensures that community perspectives on risk and resilience are not merely heard but are integrated into formal policy and practice. The result is a more inclusive and effective framework where local knowledge and needs drive disaster risk reduction efforts.

286. (D) Disasters exacerbate pre-existing vulnerabilities and inequalities.
Disasters do not affect everyone equally; instead, they tend to worsen existing social and economic disparities within a population. Vulnerable groups often experience a disproportionate impact because they lack the resources and political voice necessary to protect themselves. Acknowledging that disasters exacerbate these pre-existing inequalities is fundamental to developing a just and effective community-based approach to disaster risk management and recovery.

287. (C) Due to compounded factors like limited resources and lack of political voice.
The disproportionate impact of disasters on marginalized groups is the result of several overlapping social factors. These include limited access to financial resources, social exclusion, and a lack of political representation to advocate for their needs. Furthermore, these populations often live in high-risk locations with poor infrastructure, which significantly compounds their vulnerability and reduces their ability to recover from hazard events.

288. (A) A differentiated approach that targets the specific needs of vulnerable groups.
To effectively address social justice challenges, disaster risk reduction strategies must move beyond a one-size-fits-all model. Instead, they should adopt a differentiated approach that specifically targets the unique needs and existing capacities of vulnerable segments. This involves ensuring meaningful participation in decision-making and creating relief programs that are accessible and sensitive to the cultural contexts of all community members.

NODIA

289. (D) It can weaken the overall resilience of the entire community.
Ignoring social justice in disaster management leads to unjust outcomes and negatively affects the entire population. When the vulnerabilities of one segment remain unresolved, they can create cascading risks that impact the community's total resilience. Failure to protect the most vulnerable members ultimately makes the whole community more susceptible to shocks and hampers the collective ability to achieve sustainable risk reduction.

290. (A) achieve more equitable and sustainable risk reduction.
Ensuring that marginalized groups have a meaningful voice in decision-making is a cornerstone of equitable disaster management. This participation allows for the creation of policies that are truly inclusive and responsive to diverse needs. By involving these populations, disaster risk reduction becomes more sustainable, as it addresses the root causes of vulnerability and protects the rights of everyone throughout the disaster cycle.

16. What is the most appropriate definition of an 'outbreak'?
(A) A worldwide spread of a newly identified infectious disease.
(B) A sudden increase in cases above what is normally expected in a specific area.
(C) The constant, predictable, low-level presence of a disease in a community.
(D) A disease that has been eradicated globally and then reappears.

17. Which of the following is an example of a 'zoonotic disease'?
(A) Scurvy
(B) Rabies
(C) Measles
(D) Hypertension

18. What is the main objective of Psychological First Aid (PFA)?
(A) To offer a humane, supportive, and practical response to people in crisis.
(B) To provide a clinical diagnosis of underlying mental health disorders.
(C) To require individuals to talk about traumatic experiences in detail.
(D) To administer psychotropic medication to all disaster survivors.

19. In the context of CBRNe disasters, what does the letter 'N' stand for?
(A) Neurological
(B) Nutritional
(C) Nuclear
(D) National

20. Which of the following statements accurately describe aspects of biological disasters and public health emergencies?
1. Biological disasters are always naturally occurring events.
2. Containment strategies are crucial for limiting the spread of infectious diseases.
3. Agroterrorism is a form of biological attack targeting livestock and crops.
4. The International Health Regulations (IHR) are a binding instrument of international law.
5. Mass vaccination is always the first and only response measure.

Choose the correct combination of statements.
(A) 1, 2, and 5
(B) 2, 3, and 4
(C) 1, 4, and 5
(D) 2, 3, and 5

21. The evaluation of disaster programs and projects primarily aims to:
(A) Determine the individual accountability of workers in the response.
(B) Allocate additional financial resources to research projects.
(C) Assess the relevance, effectiveness, efficiency, and impact of the intervention.
(D) Document the chronological sequence of events for historical records.

22. A disease that spreads across several countries and continents affecting a large number of people is classified as a:
(A) Pandemic
(B) Endemic
(C) Outbreak
(D) Epidemic

23. Which of the following is a primary method for controlling vector-borne diseases like malaria in an emergency setting?
(A) Providing nutritionally dense, high-protein food supplements.
(B) Administering prophylactic antibiotics to the entire population.
(C) Promoting cardiovascular exercise to improve community health.
(D) Using insecticide-treated nets (ITNs) and indoor residual spraying (IRS).

24. A key methodological challenge in disaster epidemiology is:
(A) Defining the affected population and ensuring accurate data collection.
(B) The total lack of any theoretical framework to guide research.
(C) The ethical impossibility of conducting any studies on populations.
(D) The consistent over-reporting of health outcomes by survivors.

25. Put the general steps of an outbreak investigation into the correct chronological order:
1. Define and identify cases.
2. Verify the diagnosis and confirm the

Click Here to Buy book on Amazon

299. (C) To translate technical knowledge and drive community-led preparedness.
Civil society and volunteer organizations are essential for championing a proactive culture of safety within communities. They bridge the gap between technical mitigation knowledge and local practice by translating complex information into actionable steps. By driving community-led preparedness activities and drills, these organizations ensure that risk reduction strategies are widely adopted and tailored to the specific needs and context of the population.

300. (A) Mitigation.
Building a levee to control or reduce floodwater levels is a classic example of a mitigation measure. Since it is often impossible to prevent a flood from occurring entirely, structural interventions like levees are used to limit the severity of the impact on surrounding areas. This approach aims to protect lives and property by managing the hazard's intensity rather than avoiding it altogether.

www.nodia.in

NODIA

291. (D) The capacity to absorb, adapt to, and recover efficiently from a hazard.
Resilience represents the multifaceted capacity of a community to navigate the challenges posed by hazards. It involves not only surviving the initial impact but also absorbing the shock and adapting to changing circumstances efficiently. A resilient community can restore its essential functions and structures in a timely manner, often enhancing them in the process to better withstand future disasters and social disruptions.

292. (A) Disaster literacy is a critical enabler for building community resilience.
Disaster literacy acts as a fundamental catalyst for developing community-wide resilience. When community members possess a deep understanding of local hazards and protective measures, they are better equipped to respond effectively to crises. This knowledge transforms individuals into active agents of safety who can manage their own vulnerabilities. Consequently, enhancing literacy is an essential step toward building a truly resilient and prepared population.

293. (D) An actionable understanding of risks, vulnerabilities, and protective measures.
Disaster literacy goes beyond simple awareness to encompass an actionable understanding of one's environment and safety. It includes specific knowledge of local hazards, personal vulnerabilities, and the practical skills required for preparation and protection. A disaster-literate person can interpret warning signals and follow established safety protocols, making this form of understanding a vital component of any community-based disaster risk reduction strategy.

294. (D) Having a family emergency plan and knowing evacuation routes.
A disaster-literate community is characterized by its proactive approach to safety and preparedness. Members of such a community demonstrate their knowledge through practical actions, such as developing family emergency plans and memorizing evacuation routes. They also understand how to interpret early warning signals and implement mitigation measures. This level of preparation ensures that the population can act decisively and safely when a hazard occurs.

295. (A) transform passive victims into proactive agents of safety.
By providing individuals and families with practical knowledge and technical skills, disaster literacy changes their role in the disaster management cycle. Instead of being passive victims who rely solely on external aid, they become proactive agents of their own safety. This empowerment is achieved through sustained education and drills, creating a foundation where the community can take collective responsibility for its resilience.

296. (D) Prevention aims to avoid impacts entirely, while mitigation aims to lessen their severity.
Prevention and mitigation are distinct strategies within the disaster risk reduction continuum. Prevention focuses on the outright avoidance of hazard impacts, often through restrictive measures like prohibiting construction in dangerous zones. Mitigation, however, recognizes that some impacts cannot be avoided and instead seeks to lessen or limit their severity. Both are essential for reducing the adverse effects of hazards on a community.

297. (A) Developing a community evacuation plan and conducting drills.
Preparedness involves taking specific actions in advance to ensure an efficient response to hazards. Developing community-wide evacuation plans, stockpiling essential supplies, and conducting regular emergency drills are hallmark preparedness activities. These measures do not prevent the hazard itself but ensure that the community is ready to react quickly and effectively, thereby minimizing the risk to human life and safety when disasters strike.

298. (A) An ongoing process integrated into community life and development.
A proactive culture in disaster management requires a shift from reactive responses to a continuous focus on prevention and preparedness. This means that risk reduction is not treated as a temporary project but is instead integrated into the daily life and long-term development of the community. Such a culture ensures that safety considerations are always present in planning, resource allocation, and social activities.

Downloaded from www.pdf.tube

(A) To provide immediate psychological first aid to all survivors.
(B) To arrest and prosecute individuals responsible for the disaster.
(C) To conduct a comprehensive census of the entire affected population.
(D) To estimate damage and define strategies for recovery and reconstruction.

8. Which of the following is a core component of an Integrated Disease Surveillance Project (IDSP)?
(A) Systematic collection, analysis, and dissemination of data on epidemic-prone diseases.
(B) Strategic management of financial aid distribution during a major disaster.
(C) Architectural construction of earthquake-resistant regional hospitals.
(D) Legal regulation of pharmaceutical drug pricing for the population.

9. The term 'PHEIC' stands for which of the following in the context of global health?
(A) Private Health Enterprise for International Cooperation
(B) Pandemic Health Emergency of Intercontinental Concern
(C) Public Health Emergency of International Concern
(D) Public Health and Environment International Committee

10. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : Monitoring and evaluation are crucial for improving the effectiveness of disaster health programs.
Reason (R) : They provide evidence-based feedback on what works, what does not, and why, allowing for corrective actions and better planning.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

11. Which factor is considered a primary driver for the emergence of new infectious diseases?
(A) Decreased global population density in urban areas.
(B) Increased genetic diversity in isolated human populations.
(C) The successful eradication of all major vector species.
(D) Microbial adaptation and change, often due to human activity.

12. In disaster mental health, what does 'PTSD' stand for?
(A) Post-Traumatic Support Directive
(B) Post-Traumatic Stress Disorder
(C) Psycho-Traumatic Stress Disorder
(D) Pre-Traumatic Stress Diagnosis

NODIA

13. The 'One Health' concept emphasizes the interconnectedness of the health of:
(A) Doctors, nurses, and patients.
(B) Primary, secondary, and tertiary healthcare.
(C) Humans, animals, and the environment.
(D) Physical, mental, and social well-being.

14. What is the primary purpose of the Minimum Initial Service Package (MISP) for Sexual and Reproductive Health (SRH) in emergencies?
(A) To provide comprehensive and permanent family planning services.
(B) To build long-term maternal and child health clinics in the region.
(C) To offer advanced clinical treatments for population infertility.
(D) To manage sexual violence consequences and reduce HIV transmission.

15. Consider the following statements regarding the Health-EDRM Framework:
1. It focuses solely on the response phase of a disaster.
2. It is a comprehensive framework covering prevention, preparedness, response, and recovery.
3. It disregards the importance of community resilience.
4. Its goal is to reduce health risks and consequences of emergencies and disasters.

Which of the above statements are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2 and 3
(D) 2, 3 and 4

Choose the correct sequence:
(A) 1, 3, 2, 4
(B) 3, 1, 2, 4
(C) 1, 2, 3, 4
(D) 2, 4, 1, 3

51. The process of monitoring and evaluation of health systems is cyclical and primarily aims to:
(A) Punish underperforming health workers.
(B) Replace existing infrastructure with new technology every year.
(C) Support continuous quality improvement and evidence-based decision-making.
(D) Increase the administrative burden on clinical staff.

52. In the Health-EDRM framework, which component involves actions taken in advance of a disaster to reduce its impact on health?
(A) Response
(B) Preparedness and Mitigation
(C) Recovery
(D) Evaluation

53. What is the generally accepted minimum water quantity needed per person per day in an emergency for survival (drinking and food)?
(A) 1 liter
(B) 15-20 liters
(C) 50 liters
(D) 3-5 liters

54. Post-disaster epidemiological investigations are important for all the following reasons EXCEPT:
(A) To immediately prosecute those at fault for the disaster.
(B) To identify risk factors for death and injury.
(C) To evaluate the effectiveness of relief efforts.
(D) To plan for future disasters.

55. Match List I with List II regarding outbreak investigation.
List I: (Step/Concept)
P. Case definition
Q. Line listing
R. Epi curve
S. Hypothesis
List II: (Description)
1. A visual display of the onset of illness among cases associated with an outbreak.
2. A testable theory about the likely source of the outbreak.
3. A standard set of criteria for deciding whether an individual should be classified as having the health condition of interest.
4. A table containing key information about each case in an outbreak.
Choose the correct option:
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-1, S-2
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-1, R-4, S-3

56. Which of the following is a common problem in the functioning of a public health surveillance system?
(A) Over-reporting of data by motivated health workers.
(B) Incomplete and delayed reporting from peripheral health units.
(C) Lack of any diseases to monitor.
(D) Excessive funding leading to inefficient use of resources.

57. The deliberate use of viruses or bacteria to cause harm to agricultural crops is known as:
(A) Agrocrime
(B) Bioterrorism
(C) Biosecurity
(D) Agroterrorism

58. Which of the following is a key component of the Global Health Security Agenda (GHSA)?
(A) Promoting a global approach to prevent, detect, and respond to threats.
(B) Focusing solely on the economic impact of pandemics.
(C) Limiting the sharing of health information between countries.
(D) Advocating for the closure of all international borders permanently.

59. The 'One Health' approach is particularly relevant for the control of:
(A) Genetic disorders.
(B) Non-communicable diseases like diabetes.
(C) Zoonotic diseases.
(D) Injuries from road traffic accidents.

60. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : The management of biomedical

Click Here to Buy book on Amazon

outbreak.
3. Describe and orient the data in terms of time, place, and person.
4. Develop and evaluate hypotheses.

Choose the correct sequence:
(A) 2, 1, 3, 4
(B) 1, 2, 4, 3
(C) 4, 3, 1, 2
(D) 3, 4, 2, 1

26. Event-based surveillance primarily relies on:
(A) Analyzing unstructured information from media reports and community rumors.
(B) Pre-scheduled reporting of specific diseases from designated facilities.
(C) Data collected exclusively through national five-year census surveys.
(D) Results of laboratory tests conducted in tertiary care hospitals.

27. Which of the following is considered a primary containment strategy during the early phase of a pandemic?
(A) Developing a new vaccine for the population over the long term.
(B) Promoting international tourism to boost the national economy.
(C) Focusing solely on treating critically ill patients in hospitals.
(D) Implementing non-pharmaceutical interventions like social distancing.

28. The reappearance of a disease in a population after it had been significantly reduced or controlled is known as a:
(A) Emerging disease
(B) Re-emerging disease
(C) Endemic disease
(D) Zoonotic disease

29. Which psychosocial intervention involves helping individuals understand and manage their thoughts, feelings, and behaviors following a disaster?
(A) Psychological First Aid (PFA)
(B) Disaster Mental Health Counselling
(C) Cognitive Behavioral Therapy (CBT)
(D) Psychological Debriefing

30. Match List I with List II concerning different types of health-related threats.

List I: (Threat)
P. Bioterrorism
Q. Agroterrorism
R. Biological Hazard
S. Pandemic

List II: (Description)
1. An infectious disease outbreak that spreads across a large region, potentially worldwide.
2. A microorganism, toxin, or other biological material with the potential to cause harm to humans, animals, or plants.
3. The deliberate release of viruses, bacteria, or other germs to cause illness or death in people, animals, or plants.
4. The malicious use of plant or animal pathogens to cause devastating disease in the agricultural sector.

Choose the correct option:
(A) P-1, Q-2, R-4, S-3
(B) P-3, Q-4, R-2, S-1
(C) P-2, Q-3, R-1, S-4
(D) P-4, Q-1, R-2, S-3

31. What is the main principle behind the concept of a 'Resilient Health System'?
(A) The capacity to absorb, adapt, and transform to cope with shocks.
(B) The ability to resist any change and maintain original structure.
(C) A system that relies entirely on international aid for function.
(D) A system focused only on providing expensive medical treatments.

32. Which of the following correctly identifies an incorrect statement about the health consequences of disasters?
(A) Disasters can lead to an increase in communicable diseases.
(B) Disasters consistently lead to a decrease in the incidence of vector-borne diseases due to environmental disruption.
(C) Mental health issues, such as PTSD and anxiety, are common after disasters.
(D) Malnutrition can be a significant health consequence, especially in prolonged crises.

33. In the context of WASH in emergencies, what is the primary reason for focusing on safe excreta disposal?
(A) To improve the aesthetic appearance of the

Downloaded from www.pdf.tube

displaced persons camp.
(B) To prevent the contamination of water sources and the spread of faecal-oral diseases.
(C) To provide organic fertilizer for local small-scale agriculture.
(D) To comply with international civil engineering building codes.

34. A Disaster Registry is best described as:
(A) A database of individuals used for long-term health monitoring and research.
(B) A system for tracking financial donations for disaster relief.
(C) A list of all emergency responders and their qualifications.
(D) A legal document declaring a state of emergency.

35. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : Rapid and accurate diagnosis is a critical step in an outbreak investigation.
Reason (R) : Misdiagnosis can lead to incorrect public health interventions, wasting resources and failing to control the spread of the actual disease.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

36. Which type of surveillance involves the routine reporting of cases of diseases and conditions by healthcare facilities?
(A) Active surveillance
(B) Sentinel surveillance
(C) Event-based surveillance
(D) Passive surveillance

37. The 'risk group' classification for biological hazards is based on:
(A) The cost of the agent and the difficulty in procurement.
(B) The geographical origin of the biological agent.
(C) The agent's pathogenicity, transmission, and preventive measures.
(D) The political sensitivity surrounding the biological agent.

38. Which of the following is NOT a recognized phase of disaster mental health response?
(A) Heroic phase
(B) Indifference phase
(C) Honeymoon phase
(D) Disillusionment phase

NODIA

39. Risk assessment in a health organization primarily involves:
(A) Eliminating all possible risks regardless of cost or feasibility.
(B) Focusing only on financial risks to the organization.
(C) Assigning blame after an adverse event has occurred.
(D) Identifying hazards, analyzing the risks associated with them, and evaluating their potential impact.

40. Consider the following statements about healthcare waste management:
1. Biomedical waste includes all waste generated by a healthcare facility, including office paper.
2. Sharps, such as needles and scalpels, are a major component of infectious biomedical waste.
3. Improper management of healthcare waste poses a significant risk of infection to healthcare workers and the community.
4. All healthcare waste can be safely disposed of in municipal landfills without any treatment.

Which of the above statements are correct?
(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 2, and 3
(D) 2, 3, and 4

41. What is meant by 'human resources for health' (HRH)?
(A) The patients and communities served by the health system.
(B) The physical infrastructure, such as hospitals and clinics.
(C) The workforce including doctors, nurses, and community health workers.
(D) The budget allocated for health services by the government.

42. What is the primary objective of public health preparedness for a disaster?
(A) To ensure the capacity of the system to manage health effects.
(B) To respond to a disaster without any prior planning.
(C) To document the failures of past disaster responses.
(D) To transfer all responsibility for health outcomes to international NGOs.

43. Which of these is a disease most directly related to inadequate sanitation and is a major concern in cholera outbreak response?
(A) Influenza
(B) Tetanus
(C) Malaria
(D) Cholera

44. An epidemiological survey conducted after a disaster aims to:
(A) Distribute relief supplies to the most accessible areas.
(B) Determine the prevalence and incidence of diseases and injuries.
(C) Elect new community leaders for the affected area.
(D) Reconstruct damaged communication towers.

45. Which of the following are considered key principles for investigating a foodborne outbreak?
1. Securing and testing suspect food samples is essential.
2. Interviewing ill and well persons to identify common exposures is a standard method.
3. The investigation should only focus on the restaurant or vendor and not the food supply chain.
4. A line listing of cases should be created with details on symptoms, onset time, and food consumed.
5. Immediate closure of all food establishments in the area is the first mandatory step.

Which of the above statement(s) is/are correct?
(A) 1, 2, and 3
(B) 3, 4, and 5
(C) 1, 2, and 4
(D) 2, 3, and 5

46. What is the primary purpose of the Early Warning, Alert and Response System (EWARS)?
(A) To predict regional weather patterns and natural hazards.
(B) To manage the logistics of food aid distribution.
(C) To provide long-term mental health counseling for survivors.
(D) To support detection and response to disease outbreaks.

47. What does the term 'biosafety' primarily refer to?
(A) Containment principles and practices implemented to prevent pathogen exposure.
(B) The protection of valuable biological materials from theft or misuse.
(C) The security measures to prevent biological warfare.
(D) The process of patenting new biological discoveries.

48. A re-emerging disease is one that was previously a major public health problem, then declined dramatically, but is now:
(A) Completely eradicated worldwide.
(B) Becoming a health problem again for a significant proportion of the population.
(C) Only found in non-human animal species.
(D) Confined to a single laboratory for research purposes.

49. Which of the following best describes "community-based interventions" for psychosocial support?
(A) Providing one-on-one psychoanalysis for every community member.
(B) Utilizing community resources to promote collective well-being and resilience.
(C) Building new hospitals with large psychiatric wards.
(D) Prescribing antidepressants to the entire affected population.

50. Arrange the following stages of a pandemic in the typical WHO framework in chronological order.
1. Interpandemic phase
2. Pandemic phase
3. Alert phase
4. Transition phase

Click Here to Buy book on Amazon

CHAPTER 06

Health and Disasters

1. Which of the following best defines the role of a Health Information System (HIS) within a national health system?
(A) To coordinate the procurement and logistical distribution of essential medical supplies.
(B) To provide a framework for generating, analyzing, and disseminating health data for decision-making.
(C) To facilitate the management of patient billing and financial records in large hospitals.
(D) To oversee the regulation and professional certification of national healthcare providers.

2. In the context of disaster health, what is the term for an occurrence of a disease in a community or region clearly in excess of normal expectancy?
(A) Epidemic
(B) Endemic
(C) Pandemic
(D) Sporadic

3. Which of the following is NOT a primary principle of communicable disease prevention and control in emergencies?
(A) Rapid detection and timely response to potential outbreaks.
(B) Implementation of targeted and prioritized vaccination campaigns.
(C) Focusing exclusively on long-term chronic disease management.
(D) Ensuring sustainable access to safe water, sanitation, and hygiene.

4. A relief worker is advising a displaced community on preventing water-related diseases. Which of the following practices would be the most effective for hygiene promotion?
(A) Distributing nutritionally balanced, high-calorie food supplements.
(B) Constructing permanent concrete housing structures for the population.
(C) Providing daily regional newspapers for general information dissemination.
(D) Encouraging regular handwashing with soap at critical times.

NODIA

5. Match List I with List II regarding the tiers of healthcare services.
List I: (Healthcare Tier)
P. Primary Healthcare
Q. Secondary Healthcare
R. Tertiary Healthcare
S. Clinical Services
List II: (Description)
1. Specialized consultative care, usually on referral from primary or secondary medical care.
2. First point of contact for the community, providing preventive and curative services.
3. Direct, hands-on patient care such as diagnosis, treatment, and management of health conditions.
4. Care provided by specialists and general hospitals, often after referral from a primary care provider.
Choose the correct option:
(A) P-2, Q-4, R-1, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-1, R-4, S-3

6. What is the fundamental concept of the epidemiological triad?
(A) The clinical interaction between a doctor, a nurse, and an individual patient.
(B) The interplay of an external agent, a susceptible host, and an environment.
(C) The technical relationship between clean water, sanitation, and personal hygiene.
(D) The societal cycle of poverty, infectious disease, and lack of basic education.

7. What is the primary purpose of a Post Disaster Needs Assessment (PDNA) in the health sector?

waste is a critical public health issue, especially during disasters.

Reason (R) : During disasters, the volume of medical waste can increase significantly, and breakdown of regular waste management systems can lead to a high risk of disease transmission.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

61. What is the primary role of a 'Rapid Response Team' (RRT) in a public health emergency?
(A) To conduct long-term research on the origins of the disease.
(B) To be deployed quickly to support the control of an outbreak.
(C) To manage the hospital budget and procurement.
(D) To provide routine primary healthcare services.

62. The 'disillusionment phase' of a community's psychological response to a disaster is typically characterized by:
(A) A sense of optimism and belief that normal life will return quickly.
(B) Anger and frustration as delays in the response become apparent.
(C) A strong, altruistic spirit of community bonding and helping others.
(D) The initial shock and disbelief immediately following the disaster's impact.

63. Which of the following is NOT a component of the Minimum Initial Service Package (MISP) for SRH?
(A) Ensuring availability of clean delivery kits.
(B) Preventing sexual violence and providing care for survivors.
(C) Providing long-term infertility treatments and cosmetic gynecology.
(D) Reducing the transmission of HIV.

64. The term 'Antimicrobial Resistance' (AMR) refers to:
(A) The ability of a person's immune system to resist all types of microbes.
(B) A new class of powerful antibiotics that can kill any microbe.
(C) A psychological aversion to taking medication.
(D) The ability of a microorganism to stop a drug from working against it.

65. Consider the following statements about water quality in emergencies:
1. Water turbidity is a measure of its clarity and can indicate contamination.
2. Chemical disinfection, such as chlorination, is a common method for making water safe.
3. Boiling water is an ineffective method of disinfection.
4. The taste of water is the most reliable indicator of its safety.

Which of the above statements are correct?
(A) 1 and 2 only
(B) 3 and 4 only
(C) 1, 2 and 4
(D) 2 and 3 only

66. In disaster epidemiology, 'morbidity' refers to:
(A) The incidence of death in a population.
(B) The rate of disease or injury in a population.
(C) The number of people displaced by the disaster.
(D) The financial cost of the disaster.

67. What is a "trigger alert" in the context of outbreak investigation?
(A) An official declaration of a pandemic by the WHO.
(B) The final report published after an outbreak is over.
(C) A media campaign to raise public awareness about a disease.
(D) An early warning signal that suggests a potential outbreak.

68. What is the fundamental difference between 'indicator-based surveillance' and 'event-based surveillance'?
(A) Indicator-based uses structured data; event-based uses unstructured information.
(B) Indicator-based is for chronic diseases; event-based is for infectious diseases.
(C) Indicator-based is active; event-based is passive.
(D) There is no fundamental difference; the

Downloaded from www.pdf.tube

List I: (Intervention)
P. Psychological First Aid (PFA)
Q. Cognitive Behavioral Therapy (CBT)
R. Community-Based Intervention
S. Psychological Debriefing
List II: (Characteristic)
1. A structured approach to help individuals identify and change destructive thinking patterns and behaviors.
2. Utilizes social networks and local resources to promote collective resilience and well-being.
3. A single-session intervention aimed at processing a traumatic event shortly after it occurs.
4. A non-intrusive, practical care approach to provide immediate support and comfort to those in distress.

Choose the correct option:
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-1, R-2, S-3
(C) P-3, Q-4, R-1, S-2
(D) P-2, Q-3, R-4, S-1

106. A key method for investigating an airborne outbreak in a crowded shelter would be to:
(A) Test the water supply for chemical contaminants.
(B) Analyze spatial distribution in relation to the ventilation.
(C) Check the food history of all residents.
(D) Examine residents for insect bites.

107. Which of the following is a key component of the Integrated Disease Surveillance Project (IDSP) in India?
(A) A focus only on non-communicable diseases.
(B) A reliance on international media reports for data.
(C) The exclusion of laboratory confirmation of diseases.
(D) The establishment of a decentralized, state-based surveillance system.

108. An example of 'agrocrime' would be:
(A) The deliberate, non-political theft and sale of livestock.
(B) The accidental introduction of a non-native insect species.
(C) A naturally occurring blight that destroys a corn crop.
(D) A farmer using a banned pesticide to increase crop yield.

109. What is the primary function of International Health Regulations (IHR, 2005)?
(A) To dictate the price of medicines globally.
(B) To fund hospital construction in developing countries.
(C) To provide a legal framework for preventing disease spread.
(D) To regulate the training curriculum of doctors and nurses.

NODIA

110. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : Zoonotic diseases pose a significant and growing threat to global health.
Reason (R) : Increased human-animal contact due to deforestation, agricultural intensification, and global travel facilitates the spillover of pathogens from animals to humans.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

111. The term 'normal human response to disaster' implies that:
(A) Most people will develop severe, long-term psychiatric disorders.
(B) People are generally unemotional and unaffected by disasters.
(C) Only emergency responders are trained to have a 'normal' response.
(D) Experiencing stress, fear, and anxiety are expected reactions.

112. One Health Preparedness focuses on strengthening systems to prevent, detect, and respond to health threats at the:
(A) Hospital-clinic interface.
(B) Human-animal-environment interface.
(C) Government-NGO interface.
(D) Patient-doctor interface.

113. Health-related vulnerability in a disaster context refers to:
(A) The physical strength of hospital buildings.

existence of an outbreak.
(D) Formulate a hypothesis.

78. The primary goal of a disease control program in an emergency setting is to:
(A) Eradicate the disease completely from the region.
(B) Reduce excess disease and death.
(C) Conduct academic research on rare pathogens.
(D) Test new experimental drugs on the affected population.

79. The term 'clinical services' in a health system refers to:
(A) Administrative and managerial functions of a hospital.
(B) The provision of direct patient care, including diagnosis, treatment, and management.
(C) The maintenance of hospital buildings and equipment.
(D) The operation of the health information system.

80. Match List I with List II regarding key international health frameworks and concepts.
List I: (Term)
P. IHR (2005)
Q. GHSA
R. PHEIC
S. EWARS
List II: (Description)
1. A multi-nation initiative to build country capacity to prevent, detect, and respond to infectious diseases.
2. A system for early detection and response to outbreak-prone diseases in emergencies.
3. An international legal instrument to help countries work together to prevent and respond to acute public health risks.
4. An extraordinary event determined to constitute a public health risk to other States through international disease spread.
Choose the correct option:
(A) P-1, Q-3, R-2, S-4
(B) P-4, Q-2, R-1, S-3
(C) P-3, Q-1, R-4, S-2
(D) P-2, Q-4, R-3, S-1

81. Which statement about solid waste management in emergencies is incorrect?
(A) Improperly managed solid waste can attract vectors like rats and flies.
(B) Burial or controlled burning are common emergency disposal methods.
(C) The volume of solid waste often decreases significantly after a disaster.
(D) Solid waste can block drainage channels and increase flood risk.

82. Influenza epidemiology is of particular concern in disaster settings because:
(A) The virus is only transmitted through contaminated water.
(B) Crowded living conditions in shelters can facilitate rapid transmission.
(C) Influenza is not an infectious disease.
(D) A vaccine for influenza has never been developed.

83. The most critical information needed to trigger an investigation for a water-borne outbreak is:
(A) A single case of a common cold in the community.
(B) A forecast of heavy rainfall for the next week.
(C) A sudden clustering of gastrointestinal illness cases in time and place.
(D) A decrease in the price of bottled water.

84. The evaluation of a surveillance system often assesses its 'sensitivity', which refers to:
(A) The proportion of true cases of a disease that are detected.
(B) The system's ability to operate at a low cost.
(C) The willingness of health workers to participate in the system.
(D) The system's ability to protect the confidentiality of patient data.

85. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : Community involvement is a critical component of successful hygiene promotion in emergencies.
Reason (R) : People are more likely to adopt and sustain safe hygiene practices if they are involved in the planning and implementation of programs, rather than being passive recipients of aid.

Click Here to Buy book on Amazon

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

86. A disease that can be transmitted from vertebrate animals to humans is known as:
(A) An iatrogenic disease
(B) A zoonotic disease
(C) A nosocomial disease
(D) An idiopathic disease

87. Which of the following best defines 'psychological debriefing'?
(A) A long-term therapeutic process for chronic mental illness.
(B) The act of providing comfort, food, and shelter to survivors.
(C) An initial assessment to screen for pre-existing mental health conditions.
(D) A formal, structured intervention shortly after a traumatic event.

88. Which of the following is an example of a re-emerging disease?
(A) Tuberculosis, particularly multi-drug resistant strains, in areas where it was previously declining.
(B) COVID-19
(C) Smallpox, which has been eradicated.
(D) Avian Influenza (H5N1) in its first appearance in humans.

89. A health system that can continue to provide essential services during and after a disaster is best described as:
(A) Expensive
(B) Bureaucratic
(C) Sustainable
(D) Centralized

90. Consider the following statements regarding communicable diseases in emergencies:
1. Malnutrition increases susceptibility to infectious diseases.
2. Overcrowding in shelters can increase the risk of respiratory infections.
3. Disruption of water and sanitation systems can lead to faecal-oral disease outbreaks.
4. All communicable diseases are transmitted by insect vectors.

Which of the above statements are correct?
(A) 1, 2, and 3
(B) 1 and 4 only
(C) 2, 3, and 4
(D) All of the above

91. The concept of 'health in DRR frameworks' emphasizes that:
(A) Health is only a concern during the response phase of a disaster.
(B) The health sector has no role in disaster risk reduction.
(C) DRR frameworks should focus exclusively on engineering and construction.
(D) Protecting health infrastructure is a key component of building resilience.

92. Which of the following is a primary objective of 'One Health Preparedness'?
(A) To stockpile medicines for human use only.
(B) To improve collaboration between sectors before an outbreak occurs.
(C) To focus exclusively on veterinary diseases that do not affect humans.
(D) To reduce the number of veterinarians and public health officials.

NODIA

93. What is the role of epidemiology in disaster management?
(A) To describe health effects and contribute to evidence-based response.
(B) To solely manage the financial aspects of disaster relief.
(C) To provide architectural designs for disaster-resilient buildings.
(D) To lead search and rescue operations.

94. Which of these is NOT a step in an outbreak investigation?
(A) Defining and identifying cases.
(B) Performing descriptive epidemiology.
(C) Developing hypotheses.
(D) Immediately publishing results in a scientific journal before control measures are implemented.

95. Which of the following are components of a comprehensive Health Information System (HIS)?

1. Data generation from health facilities and communities.
2. Data analysis and interpretation.
3. Information dissemination to decision-makers.
4. Human resources management for the entire government.
5. National economic policy formulation.

Choose the correct combination of components.
(A) 1, 2, and 3
(B) 1, 4, and 5
(C) 2, 3, and 4
(D) 3, 4, and 5

96. Which of the following is considered a biological hazard?
(A) An earthquake
(B) A sample of the Ebola virus
(C) A chemical spill
(D) A nuclear reactor meltdown

97. The 'honeymoon phase' of psychological response to disaster is characterized by:
(A) Widespread anger and frustration with relief efforts.
(B) A gradual return to a new normal, with acceptance of the situation.
(C) The initial shock and confusion at the moment of impact.
(D) A period of intense community bonding and altruism.

98. Maternal health and safe motherhood initiatives in disasters focus on:
(A) Providing cosmetic surgery services.
(B) Ensuring access to clean delivery, obstetric care, and support.
(C) Offering long-term infertility treatments.
(D) Organizing sports events for new mothers.

99. In the context of a chemical disaster, what is the most critical immediate action for victims?
(A) Providing psychosocial counseling.
(B) Starting a long-term nutritional support program.
(C) Decontamination to remove the hazardous substance.
(D) Conducting a detailed epidemiological survey.

100. Arrange the following components of the epidemiological triad in the order that correctly corresponds to: Pathogen, Affected Person, Contaminated Environment.
1. Host
2. Agent
3. Environment

Choose the correct sequence:
(A) 1, 2, 3
(B) 2, 1, 3
(C) 3, 1, 2
(D) 2, 3, 1

101. Tertiary healthcare services are typically characterized by:
(A) Being the first point of contact for patients.
(B) Focusing on health promotion and disease prevention in the community.
(C) Being managed exclusively by community health volunteers.
(D) Providing specialized, complex diagnostic and treatment services.

102. An endemic disease is a disease that:
(A) Is present in a community at all times, usually at a low, predictable level.
(B) Appears suddenly in excess of normal expectancy.
(C) Spreads worldwide.
(D) Has been completely eliminated from a region.

103. Which is NOT a major category of diseases related to water in emergencies?
(A) Water-borne diseases
(B) Water-washed (or water-scarce) diseases
(C) Water-based diseases
(D) Water-enhanced diseases

104. The Health Management Information System (HMIS) is a subtype of the broader Health Information System (HIS) that specifically focuses on:
(A) Genetic research data.
(B) Patient satisfaction surveys only.
(C) Pharmaceutical company marketing data.
(D) Data for the management and planning of health services.

105. Match List I with List II regarding mental health interventions.

NODIA

outcomes.

Which of the above statements are correct?

(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2, and 3
(D) 2, 3, and 4

141. The evaluation of a disaster health program's 'efficiency' assesses:

(A) Whether the program achieved its intended objectives.
(B) The long-term positive and negative effects of the program.
(C) The extent to which results were achieved at a reasonable cost.
(D) Whether the program's objectives were relevant to the needs of the population.

142. A major disease of concern in non-emergency settings that can be exacerbated during an emergency due to disruption of care is:

(A) Diabetes
(B) Smallpox
(C) The common cold
(D) Polio

143. In planning for excreta disposal in an emergency camp, the most important initial consideration is:

(A) The aesthetic design of the toilet superstructure.
(B) Using high-cost, imported materials for construction.
(C) Ensuring the toilets are located as far away as possible, making them inconvenient to use.
(D) Preventing contamination of water sources and the immediate environment.

144. In the epidemiological triad, a person with a weak immune system due to malnutrition would be considered:

(A) A susceptible host
(B) An agent
(C) The environment
(D) A vector

145. Which of the following are key steps in an outbreak investigation?

1. Establish existence of an outbreak.
2. Verify the diagnosis.
3. Prepare a line listing of cases.
4. Ignore all community reports and rumors.
5. Wait for the outbreak to end before starting the investigation.

Which of the above statements are correct?

(A) 1, 4, and 5
(B) 3, 4, and 5
(C) 1, 2, and 3
(D) 2, 3, and 5

146. A major challenge in evaluating a surveillance system is:

(A) The lack of any data to evaluate.
(B) Balancing sensitivity and timeliness with simplicity and cost-effectiveness.
(C) The fact that all surveillance systems are perfect.
(D) The refusal of international bodies to provide evaluation guidelines.

147. A Public Health Emergency of International Concern (PHEIC) is formally declared by:

(A) The Director-General of the World Health Organization (WHO).
(B) The President of the United States.
(C) The Secretary-General of the United Nations.
(D) A unanimous vote of all member states of the UN.

148. The concept of 'biowarfare' refers to:

(A) The competition between pharmaceutical companies.
(B) The use of toxins or infectious agents as weapons of war.
(C) The natural evolution of viruses.
(D) The use of antibiotics to treat infections.

149. An abnormal human response to disaster might include:

(A) Feeling scared or anxious for a short period.
(B) Helping neighbors and family members.
(C) Persistent and disabling symptoms that interfere with functioning.
(D) Feeling sad about the losses incurred.

150. Arrange the typical flow of a patient through a tiered health system for a complex condition requiring surgery.

1. Visit to a tertiary care super-specialty hospital.

Downloaded from www.pdf.tube

(B) The total budget of the ministry of health.
(C) The number of doctors who own a private car.
(D) Characteristics influencing capacity to anticipate and recover.

114. The care of road traffic injury victims immediately after a large-scale disaster is often complicated by:
(A) A sudden decrease in the number of vehicles on the road.
(B) An overabundance of trained paramedics.
(C) The immediate availability of all necessary medical equipment.
(D) Overwhelmed facilities and damaged transportation infrastructure.

115. Consider the following statements about disaster mental health:
1. All individuals exposed to a disaster will develop PTSD.
2. Responders are also at risk for stress and mental health challenges.
3. Protective factors, such as social support, can mitigate the negative psychological impact.
4. Children and other vulnerable groups may have specific mental health needs.

Which of the above statements are correct?
(A) 1 and 2 only
(B) 2, 3, and 4
(C) 1, 3, and 4
(D) All of the above

116. Setting up a disease control program in an emergency requires all of the following EXCEPT:
(A) A clear case definition and diagnostic criteria.
(B) A multi-year plan for building a new specialty hospital.
(C) A system for surveillance and case detection.
(D) A defined treatment protocol and supply of essential medicines.

117. An essential feature of a resilient health infrastructure is:
(A) Its ability to be relocated easily.
(B) Its reliance on a single, centralized power source.
(C) Its aesthetic design and architectural beauty.
(D) Measures that enable it to withstand hazards and function.

NODIA

118. Which statement best describes a water-borne disease?
(A) A disease caused by a pathogen ingested through contaminated water.
(B) A disease spread by insects that breed in or near water, like malaria.
(C) A disease that increases when there is insufficient water for hygiene.
(D) A disease caused by a parasite that spends part of its cycle in an animal.

119. What is a primary challenge of conducting epidemiological studies on influenza during a pandemic?
(A) The virus mutates slowly, making tracking easy.
(B) The disease is not contagious.
(C) Asymptomatic or mild cases obscure true infection rates.
(D) There is a lack of laboratory tests to confirm infection.

120. Which of the following elements are critical for planning water and sanitation in institutions like schools or hospitals during an emergency?
1. Calculation of the number of users (students, patients, staff).
2. Assessment of existing water and sanitation facilities' functionality.
3. Ensuring an adequate ratio of toilets to users.
4. Ignoring the need for handwashing stations to save costs.
5. Disposing of all waste directly into the nearest water body.

Choose the correct combination of elements.
(A) 1, 2, and 3
(B) 3, 4, and 5
(C) 1, 4, and 5
(D) 2, 3, and 4

121. The main purpose of investigating a food-borne outbreak is to:
(A) Punish the individuals who became sick.
(B) Promote the restaurant where the outbreak occurred.
(C) Identify contamination sources to prevent further cases.
(D) Document the variety of foods available in a

region.

122. Active surveillance for a disease involves:
(A) Waiting for health facilities to send in their routine reports.
(B) Staff visiting facilities, labs, and communities to find cases.
(C) Analyzing news reports and social media for mentions of the disease.
(D) Conducting a population census.

123. The 'stages of a pandemic' are used to:
(A) Predict the exact date and time a pandemic will start and end.
(B) Determine the financial liability of the country where the pandemic originated.
(C) Rank diseases in order of their severity.
(D) Guide the implementation of preparedness and response measures.

124. Which of the following represents a factor for the emergence of new diseases?
(A) Global climate stability.
(B) A decrease in international trade.
(C) The maintenance of pristine, undisturbed ecosystems.
(D) Human demographic change including travel and urbanization.

125. Place the phases of a community's psychological response to a disaster in the correct chronological order.
1. Disillusionment Phase
2. Heroic Phase
3. Reconstruction Phase
4. Honeymoon Phase

Choose the correct sequence:
(A) 1, 2, 3, 4
(B) 2, 4, 1, 3
(C) 4, 3, 2, 1
(D) 3, 1, 4, 2

126. A 'vector' in the context of disease transmission is:
(A) An organism, often an insect, that transmits a pathogen.
(B) The microorganism that causes the disease.
(C) The person who is sick with the disease.
(D) The environmental condition that allows the disease to spread.

127. Which of the following is NOT a core component of the Health Information System (HIS)?
(A) Resources (financing, personnel, equipment)
(B) Indicators (health status, risk factors, service coverage)
(C) Data Sources (census, surveys, service records)
(D) National political party manifestos

128. What is the most significant public health threat associated with large, uncontrolled population movements during a disaster?
(A) A sudden improvement in nutritional status.
(B) An increase in the risk of outbreaks, such as measles.
(C) An immediate reduction in mental health stress.
(D) Over-staffing of local health clinics.

129. What is the primary purpose of chlorination of water in an emergency?
(A) To remove turbidity and suspended solids.
(B) To soften the water.
(C) To kill or inactivate pathogenic microorganisms.
(D) To improve the taste and color of the water.

130. Match List I with List II regarding types of waste.
List I: (Waste Type)
P. Biomedical Waste
Q. Solid Waste (municipal)
R. Excreta
S. CBRNe Waste

List II: (Example/Source)
1. Human feces and urine.
2. Food scraps, packaging, and other general garbage from shelters.
3. Contaminated materials from a radiological "dirty bomb".
4. Used syringes, contaminated dressings, and pathological waste from a field hospital.

Choose the correct option:
(A) P-4, Q-2, R-1, S-3
(B) P-1, Q-3, R-4, S-2
(C) P-2, Q-1, R-3, S-4
(D) P-3, Q-4, R-2, S-1

131. The Health Management Information System (HMIS) is primarily used by:

Click Here to Buy book on Amazon

(A) Health program managers and policy makers for decision-making.
(B) Patients to book appointments.
(C) The general public for health education.
(D) Pharmaceutical companies for marketing.

132. What is the role of a laboratory in an outbreak investigation?
(A) To distribute food and water to the affected population.
(B) To confirm the diagnosis in suspected cases.
(C) To provide psychosocial support.
(D) To manage the logistics of the response team.

133. Sentinel surveillance is a system where:
(A) Every single case of a disease is reported from all health facilities.
(B) Only rumors and media reports are monitored.
(C) Selected sites agree to report cases of one or more conditions.
(D) The entire population is tested for a disease on a weekly basis.

134. Which of the following is an example of a biological weapon?
(A) A nuclear bomb
(B) A chlorine gas canister
(C) An improvised explosive device (IED)
(D) Anthrax spores deliberately released into the air

135. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : The Minimum Initial Service Package (MISP) for Sexual and Reproductive Health should be implemented at the onset of every emergency.
Reason (R) : The MISP is a set of priority activities designed to save lives and prevent illness, especially among women and girls, who are often disproportionately affected in crises.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

136. Which factor is NOT typically considered a cause for the re-emergence of a disease?
(A) A breakdown in public health measures.
(B) Increased travel and migration.
(C) The development of antimicrobial resistance.
(D) The successful, widespread, and sustained use of an effective vaccine.

137. Managing stress and ensuring the well-being of disaster responders is crucial because:
(A) Responders are not allowed to experience any stress.
(B) It is a requirement for receiving international funding.
(C) Stressed responders are more prone to errors and health effects.
(D) It helps in writing a more dramatic final report.

138. The 'One Health' approach for Disaster Management (DM) implies:
(A) Only doctors should be involved in disaster response.
(B) Integrating veterinary, environmental, and human health expertise in planning.
(C) Post-disaster recovery should focus only on rebuilding hospitals.
(D) All disaster victims should be treated in a single, large hospital.

139. Health-related rehabilitation after a disaster includes:
(A) Rebuilding roads and bridges only.
(B) Distributing one-time cash grants to all survivors.
(C) Prosecuting government officials for negligence.
(D) Providing care for disability, psychosocial support, and restoring services.

140. Consider the following statements about Post Traumatic Stress Disorder (PTSD):
1. It is a normal and transient stress reaction that always resolves without intervention.
2. Its symptoms can include flashbacks, nightmares, and severe anxiety.
3. It can only be diagnosed in military veterans, not in disaster survivors.
4. Early recognition and access to appropriate mental health support can improve

terms are interchangeable.

69. Which of the following is the most accurate statement regarding 'biosecurity'?
(A) It is the studies of the economic impact of biological organisms.
(B) It is a branch of agriculture focused on organic farming.
(C) It refers to measures to protect agents from loss, theft, or misuse.
(D) It is the same as biosafety.

70. Which of the following are recognized as major health consequences of disasters?
1. Increased incidence of communicable diseases.
2. Exacerbation of chronic non-communicable diseases due to disruption of care.
3. Increased psychological distress and mental health disorders.
4. Improved nutritional status due to high-energy food aid.
5. A significant and lasting decrease in all types of injuries.

Choose the correct combination of consequences.
(A) 1, 4, and 5
(B) 1, 2, and 3
(C) 2, 3, and 4
(D) 3, 4, and 5

71. Infant and young child feeding in emergencies (IYCF-E) principles strongly advise against:
(A) Uncontrolled distribution of breast-milk substitutes (infant formula).
(B) Promoting and supporting breastfeeding.
(C) Providing safe and appropriate complementary foods.
(D) Ensuring mothers and caregivers have access to clean water.

72. The 'One Health' concept is a collaborative, multisectoral, and transdisciplinary approach that works at which levels?
(A) Only the international level.
(B) The local, national, regional, and global levels.
(C) Only the local and community levels.
(D) Only within veterinary and medical schools.

73. The primary purpose of health advice for emergency responders is to:
(A) Discourage them from participating in relief efforts.
(B) Train them to perform complex surgical procedures.
(C) Ensure their safety and well-being during the response.
(D) Help them to secure long-term employment after the response.

74. A key aspect of managing victims of Road Traffic Injuries (RTIs) in a disaster context is:
(A) Focusing only on minor injuries to clear the roads quickly.
(B) Waiting for international medical teams to arrive before providing any care.
(C) Prioritizing property damage assessment over patient care.
(D) Establishing an effective triage and trauma care system.

75. Arrange the following actions for hygiene promotion in a displaced persons camp in a logical sequence of implementation.
1. Distribute hygiene kits (soap, buckets, etc.).
2. Conduct a rapid assessment of current hygiene practices and knowledge.
3. Establish community-based hygiene promotion teams.
4. Monitor handwashing practices and provide feedback.

Choose the correct sequence:
(A) 1, 2, 3, 4
(B) 2, 1, 3, 4
(C) 3, 4, 1, 2
(D) 4, 1, 2, 3

76. In the context of disaster epidemiology, a case-control study is often used to:
(A) Describe the number of deaths over time.
(B) Compare the exposure history of cases and controls to identify risk factors.
(C) Monitor the entire population for the development of new diseases over many years.
(D) Provide a simple count of affected individuals at a single point in time.

77. What is the first step in an outbreak investigation?
(A) Communicate findings to the public.
(B) Implement control measures.
(C) Prepare for fieldwork and establish the

Downloaded from www.pdf.tube

2. Referral from a secondary care hospital.
3. Initial consultation at a primary health centre.
4. Admission to a secondary care district hospital for initial tests.

Choose the correct sequence:
(A) 1, 2, 3, 4
(B) 3, 4, 2, 1
(C) 4, 3, 1, 2
(D) 2, 1, 3, 4

151. One of the main goals of "One Health Preparedness" is to:
(A) Increase the separation between veterinary and human medicine.
(B) Foster integrated readiness for managing health emergencies.
(C) Focus solely on environmental health issues like air pollution.
(D) Eliminate the need for public health surveillance.

152. Which of the following best represents a health-related rehabilitation activity following a major earthquake?
(A) Clearing rubble from major highways.
(B) Re-establishing mobile phone networks.
(C) Distributing cash to all residents.
(D) Providing limbs and physiotherapy for amputees.

153. In a CBRNe event, the 'R' stands for 'Radiological'. An example of a radiological disaster is:
(A) The release of anthrax spores.
(B) A major flood.
(C) The Chernobyl nuclear power plant accident.
(D) An outbreak of influenza.

154. What is the primary reason for the concern about Antimicrobial Resistance (AMR) in a disaster setting?
(A) The cost of antimicrobial drugs always decreases during disasters.
(B) Antimicrobials become more effective in disaster situations.
(C) AMR is only a problem in high-income countries, not in disaster zones.
(D) Conditions increase infection risk while inappropriate use potential is high.

155. Match List I with List II regarding different disease transmission concepts.
List I: (Concept)
P. Water-borne
Q. Vector-borne
R. Airborne
S. Zoonotic
List II: (Example of Transmission)
1. Inhaling droplets from an infected person's cough.
2. Being bitten by a mosquito carrying the malaria parasite.
3. Drinking water contaminated with Vibrio cholerae.
4. Contact with an animal infected with the rabies virus.

Choose the correct option:
(A) P-1, Q-4, R-2, S-3
(B) P-2, Q-3, R-4, S-1
(C) P-3, Q-2, R-1, S-4
(D) P-4, Q-1, R-3, S-2

156. The primary purpose of monitoring disease control programs is to:
(A) Track progress, identify problems, and adjust strategies.
(B) Punish the community for not complying with health advice.
(C) Justify a reduction in program funding.
(D) Conduct a census of the population.

NODIA

157. Which statement about hygiene and food safety in emergency kitchens is most accurate?
(A) Food should be cooked thoroughly and served hot to minimize microbial risk.
(B) Handwashing facilities for food handlers are an unnecessary luxury.
(C) Raw and cooked foods can be safely stored together on the same surfaces.
(D) It is safe to use water from any source for cooking without treatment.

158. The Health-EDRM (Health Emergency and Disaster Risk Management) framework is designed to be:
(A) A rigid set of rules applicable only to earthquakes.
(B) A system for managing financial donations.
(C) A framework used exclusively by the military.
(D) A comprehensive and integrated approach

applicable to all hazards.

159. Which is an example of an emerging infectious disease?
(A) Polio
(B) Tuberculosis
(C) A novel coronavirus appearing for the first time.
(D) Smallpox

160. The following question consists of two statements, an Assertion (A) and a Reason (R).
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

161. A key characteristic of 'disaster mental health counseling' is that it is:
(A) A long-term, psychoanalytic process lasting for several years.
(B) Short-term, practical, and focused on coping skills.
(C) Exclusively for emergency responders and not for survivors.
(D) Only delivered in a formal hospital setting.

162. The 'One Health' approach is critical for addressing complex problems such as:
(A) The emergence of antimicrobial resistance.
(B) The design of hospital information systems.
(C) The management of hospital finances.
(D) The scheduling of surgical operations.

163. A health vulnerability assessment for a coastal community would primarily focus on risks related to:
(A) Earthquakes and volcanic eruptions.
(B) Wildfires and droughts.
(C) Cyclones, storm surges, and water-borne diseases.
(D) Avalanches and blizzards.

164. In a mass casualty incident resulting from an explosion, the 'E' in CBRNe, what is the primary health system challenge?
(A) Dealing with a slow, creeping increase in chronic diseases.
(B) Preventing the spread of a communicable disease.
(C) Ensuring long-term nutritional support.
(D) Managing a sudden surge of trauma patients.

165. Consider the following statements about Health Information Systems (HIS):
1. They are only useful for high-income countries.
2. A key function is to provide data for evidence-based decision-making.
3. They rely solely on paper-based records.
4. Monitoring and evaluation of the HIS itself is necessary to ensure it functions well.

Which of the above statements are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2, and 3
(D) 2, 3, and 4

166. In the context of public health, what is a pandemic?
(A) A localized outbreak of a disease.
(B) An epidemic that has spread over several countries or continents.
(C) A disease that is always present in a certain population.
(D) A disease caused by a genetic mutation.

167. One of the main principles of communicable disease control in emergencies is the rapid implementation of:
(A) Long-term economic development projects.
(B) Mass media campaigns on unrelated topics.
(C) Public health measures like vaccination and hygiene promotion.
(D) Elections for new political leadership.

168. Why is community involvement crucial for the success of Water, Sanitation, and Hygiene (WASH) programs in emergencies?
(A) It ensures interventions are appropriate and accepted.
(B) It reduces the need for any external funding or resources.
(C) It allows aid agencies to delegate all responsibilities to the affected population.
(D) It is a legal requirement by all donor governments, regardless of effectiveness.

Click Here to Buy book on Amazon

169. What does mortality refer to in disaster epidemiology?
(A) The incidence of non-fatal injuries.
(B) The number of health facilities damaged.
(C) The number of deaths caused by the disaster.
(D) The psychological impact on survivors.

170. Which of the following are recognized criteria for defining an outbreak?
1. The occurrence of cases of a disease in excess of what is normally expected.
2. The cases are often linked by time, place, and person.
3. The disease must be a novel, never-before-seen pathogen.
4. The outbreak must be reported on international television news.
5. A single case of a rare or eradicated disease can be considered an outbreak.

Choose the correct combination of criteria.
(A) 1, 3, and 4
(B) 3, 4, and 5
(C) 1, 2, and 5
(D) 2, 3, and 4

171. Which component is part of the 'design' of a public health surveillance system?
(A) Determining the objectives, case definitions, and data sources.
(B) Firing staff who do not report data on time.
(C) Publishing the final surveillance report.
(D) The day-to-day collection of data.

172. The term 'healthcare waste' encompasses:
(A) Only waste generated by patients, not by staff.
(B) All waste including infectious and non-infectious.
(C) Only sharps like needles and blades.
(D) Only expired pharmaceuticals.

173. International Health Regulations (IHR) are an agreement between countries to:
(A) Standardize the cost of all medical procedures.
(B) Share hospital profits and losses.
(C) Enforce a single language for all medical records.
(D) Build capacity to detect and report emergencies.

174. Which of these is a major factor contributing to the emergence of zoonotic diseases?
(A) Decreased human population.
(B) The development of highly effective, universal animal vaccines.
(C) A global trend towards vegetarianism.
(D) Expansion into uninhabited areas increasing contact with wildlife.

175. Arrange the following disaster mental health interventions in order from the most immediate/general to more specialized/long-term.
1. Community-based psychosocial support programs.
2. Psychological First Aid (PFA).
3. Specialized trauma therapy like CBT for PTSD.

Choose the correct sequence:
(A) 1, 2, 3
(B) 3, 2, 1
(C) 2, 1, 3
(D) 2, 3, 1

176. What is the primary focus of risk management in a health organization?
(A) To identify hazards and implement measures to reduce harm.
(B) To secure the maximum possible profit for the organization's shareholders.
(C) To respond to media inquiries after an adverse event.
(D) To purchase the most expensive insurance policies available.

177. Providing clean delivery kits and ensuring access to emergency obstetric care are key components of which program in a disaster setting?
(A) Solid waste management.
(B) Vector-borne disease control.
(C) Mental health and psychosocial support.
(D) Maternal health and safe motherhood.

178. The primary goal of a "One Health Approach" for DM is to:
(A) Achieve outcomes by recognizing the interconnection between sectors.
(B) Ensure all disaster victims are treated by only one doctor.
(C) Create a single, global health insurance plan.
(D) Focus disaster management efforts solely

Downloaded from www.pdf.tube

(D) An eradicated disease

233. Which of the following is NOT a general measure of psychosocial support in emergencies?
(A) Providing accurate information and dispelling rumors.
(B) Reuniting separated families.
(C) Forcing individuals to narrate their traumatic experiences to a large group.
(D) Ensuring basic needs like safety, food, and water are met.

234. The concept of 'food safety' in an emergency context includes all of the following EXCEPT:
(A) Ensuring food is protected from contamination.
(B) Cooking food thoroughly to kill pathogens.
(C) Distributing exotic and expensive food items to all survivors.
(D) Promoting safe storage of raw and cooked foods.

235. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : A well-functioning Health Information System (HIS) is a cornerstone of a resilient health system.
Reason (R) : Timely and reliable health information is essential for situation analysis, resource allocation, and monitoring of response and recovery efforts during and after a disaster.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

236. One of the main challenges in the monitoring and evaluation of health systems in disaster-prone areas is:
(A) The complete lack of any health data.
(B) Establishing a pre-disaster baseline to measure impact and response.
(C) The disinterest of international organizations in evaluation.
(D) The fact that health status always improves after a disaster.

237. The difference between an epidemic and a pandemic is primarily one of:
(A) Geographical scale
(B) Severity
(C) Causative agent
(D) Treatment availability

238. Control of vector-borne diseases like dengue in an emergency setting would focus on:
(A) Eliminating mosquito breeding sites and promoting personal protection.
(B) Mass antibiotic distribution.
(C) Improving air quality in shelters.
(D) Providing psychological first aid.

NODIA

239. An epidemiological study that describes the distribution of a disease in a population by time, place, and person is known as:
(A) An experimental study
(B) A descriptive study
(C) An analytical study
(D) A clinical trial

240. Consider the following statements about outbreak response:
1. The primary goal is to control the spread of the disease.
2. Communication with the public is a critical component.
3. Response measures should be based on the findings of the investigation.
4. Once an outbreak is confirmed, no further investigation is necessary.

Which of the above statements are correct?
(A) 1, 2, and 3
(B) 1 and 4 only
(C) 2, 3, and 4
(D) All of the above

241. Which of the following is a primary objective of the International Health Regulations (IHR, 2005)?
(A) To achieve global security through international cooperation.
(B) To set the price for all pharmaceuticals worldwide.
(C) To manage the World Bank's health project portfolio.
(D) To dictate the specific design of hospitals in member countries.

242. The management of healthcare waste is crucial to prevent:

Biological, Radiological, Nuclear, or Explosive).
(B) The political affiliation of the affected population.
(C) The time of day the event occurs.
(D) The availability of news crews to film the response.

188. In emergency water supply, 'water quality' refers to:
(A) Characteristics that make water safe for human consumption.
(B) The total amount of water available per person.
(C) The price of bottled water in the local market.
(D) The distance people have to travel to collect water.

189. Which of the following correctly identifies an incorrect statement about outbreak investigations?
(A) An epidemic curve can help visualize the outbreak's magnitude and time trend.
(B) A case definition is crucial for standardizing case identification.
(C) Investigations should only be started after the outbreak has naturally subsided.
(D) Control and prevention measures are the ultimate goal of the investigation.

190. Consider the following statements about Public Health Surveillance:
1. It is the ongoing, systematic collection, analysis, and interpretation of health-related data.
2. The primary purpose of surveillance is for action, such as investigation and control.
3. Surveillance is only concerned with infectious diseases.
4. Event-based surveillance uses reports of events that could signal a public health risk.

Which of the above statements are correct?
(A) 1, 2, and 4
(B) 1 and 3 only
(C) 2, 3, and 4
(D) All of the above

191. A key risk during the recovery phase of a pandemic is:
(A) The virus completely disappearing forever.
(B) A premature relaxation of measures leading to a resurgence.
(C) The economy recovering too quickly.
(D) An oversupply of vaccines and treatments.

192. Which of the following is a key issue to consider during a mass vaccination campaign?
(A) Providing vaccines only to the wealthiest individuals.
(B) Using the same needle for multiple people to save time.
(C) Having no system for monitoring adverse events.
(D) Ensuring a cold chain to maintain vaccine efficacy.

193. Post-Traumatic Stress Disorder (PTSD) is classified as:
(A) A physical injury sustained during a disaster.
(B) A communicable disease.
(C) An anxiety disorder after exposure to a terrifying event.
(D) A normal, transient response to stress.

194. The Minimum Initial Service Package (MISP) for Sexual and Reproductive Health is so named because:
(A) It represents the priority services implemented from the onset.
(B) It is the most expensive and comprehensive package available.
(C) It is designed to be implemented only in the final recovery phase.
(D) It is a package offered by private health insurance companies.

195. Which of the following are essential considerations for the safe management of biomedical waste?
1. Segregation of waste at the point of generation into different categories (e.g., infectious, sharps).
2. Use of puncture-proof containers for sharps.
3. Appropriate treatment of infectious waste before final disposal.
4. Openly burning all types of medical waste in public areas.
5. Mixing sharps with general, non-hazardous waste.

Which of the above statements are correct?
(A) 1, 4, and 5

Click Here to Buy book on Amazon

(C) Tertiary healthcare
(D) Preventive healthcare

215. Consider the following statements regarding the consequences of disasters:
1. Disasters can destroy health infrastructure, disrupting essential services.
2. The psychological impact on a population is often negligible and short-lived.
3. There is often an increased risk of communicable diseases due to poor living conditions.
4. Chronic diseases are unaffected as patients can always access their regular care.

Which of the above statements are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2, and 3
(D) All of the above

216. Safe disposal of human excreta in an emergency is primarily aimed at preventing which group of diseases?
(A) Respiratory infections like influenza.
(B) Faecal-oral diseases like cholera and typhoid.
(C) Vector-borne diseases like malaria.
(D) Non-communicable diseases like hypertension.

217. A 'cohort study' in disaster epidemiology typically involves:
(A) Following a group over time to see who develops a health outcome.
(B) Comparing a group with a disease to a group without the disease at a single point in time.
(C) Analyzing aggregated national health statistics.
(D) Interviewing key informants about their opinions.

218. An 'epi curve' is a graph that plots the number of cases of a disease by their date of onset. Its primary use in an outbreak investigation is to:
(A) Help determine the likely period of exposure and spread pattern.
(B) Identify the specific person who was the first case.
(C) Calculate the total cost of the outbreak response.
(D) Map the geographical location of cases.

219. One of the main components of the Integrated Disease Surveillance Project (IDSP) is:
(A) The integration of public and private sector reporting.
(B) The focus on international disease outbreaks only.
(C) The exclusion of laboratory support services.
(D) A focus solely on chronic diseases like diabetes.

220. Which of the following are examples of containment strategies used during a public health emergency?
1. Quarantine of exposed individuals.
2. Isolation of sick individuals.
3. Social distancing measures.
4. Encouraging large public gatherings to boost morale.
5. Suspending all disease surveillance activities.

Choose the correct combination of strategies.
(A) 4 and 5 only
(B) 1, 2, and 3
(C) 1, 4, and 5
(D) 2, 3, and 4

221. A major challenge for mass vaccination campaigns in a disaster is:
(A) Logistics including the cold chain and reaching the population.
(B) A lack of people willing to be vaccinated.
(C) The extremely low cost of vaccines, leading to over-purchasing.
(D) The fact that vaccines are not effective against infectious diseases.

NODIA

222. An example of a community-based intervention for mental health is:
(A) Performing brain surgery on all anxious individuals.
(B) Establishing peer support groups and using local leaders.
(C) Building a large, centralized psychiatric hospital.
(D) Prescribing medication without a diagnosis.

223. The 'One Health' approach is particularly useful in preventing and controlling:
(A) Road traffic injuries.
(B) Genetic disorders.
(C) Zoonotic diseases that originate at the

4. Agent that causes severe human disease with no available treatment (e.g., Ebola virus).

Choose the correct option:
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-1, R-2, S-3
(C) P-3, Q-2, R-1, S-4
(D) P-2, Q-3, R-4, S-1

206. Which of the following is a primary goal of the Global Health Security Agenda (GHSA)?
(A) To limit the number of doctors trained each year.
(B) To build capacity to create a world safe from infectious threats.
(C) To nationalize all private pharmaceutical companies.
(D) To promote the use of traditional medicine over modern medicine.

207. Which statement about Emerging and Re-emerging diseases is incorrect?
(A) They pose unpredictable and serious threats to public health.
(B) Human activities, such as deforestation and urbanization, are major drivers.
(C) Once a disease emerges, it can never be controlled or eliminated.
(D) Re-emerging diseases can include drug-resistant strains of older diseases.

208. The main difference between Psychological First Aid (PFA) and therapy like CBT is that PFA:
(A) Is a non-intrusive support for immediate distress without diagnosis.
(B) Requires a formal diagnosis and is a long-term treatment.
(C) Is an intrusive method that forces people to talk about their trauma.
(D) Can only be provided by certified psychiatrists.

209. The One Health concept explicitly recognizes that the health of people is closely connected to:
(A) The health of animals and our shared environment.
(B) The state of the global economy.
(C) The political stability of nations.
(D) The advancements in information technology.

210. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : Vector-borne disease control is a critical component of health response in many disaster settings, particularly after floods.
Reason (R) : Flooding can create new breeding sites for vectors like mosquitoes, increasing the risk of diseases such as malaria and dengue fever.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

211. What is the role of risk assessment in a health organization?
(A) To proactively identify and mitigate threats to patient safety.
(B) To retroactively assign blame after an incident.
(C) To eliminate all activities that have any level of risk.
(D) To focus exclusively on financial and legal liabilities.

212. What does 'MISP' stand for in the context of reproductive health in emergencies?
(A) Minimum Initial Service Package
(B) Maximum Investment Service Package
(C) Maternal and Infant Support Program
(D) Medical Intervention and Supply Protocol

213. Antimicrobial Resistance (AMR) is a major public health concern because:
(A) It can lead to treatment failure and increased mortality.
(B) It makes treating common infections easier and cheaper.
(C) It only affects animals and has no impact on human health.
(D) New antibiotics are being discovered and developed very rapidly.

214. The tier of healthcare that serves as a referral center for primary and secondary care and provides specialized, complex services is known as:
(A) Primary healthcare
(B) Community healthcare

Downloaded from www.pdf.tube

on human health, ignoring animal and environmental factors.

179. A 'resilient health system' is one that can effectively do all the following EXCEPT:
(A) Absorb the shock of a disaster.
(B) Adapt its functions and structure to changing needs.
(C) Transform to become stronger and more effective after a crisis.
(D) Cease all operations and wait for external assistance.

180. Match List I with List II regarding epidemiological concepts.
List I: (Concept)
P. Epidemiological Triad
Q. PDNA
R. Disaster Registry
S. Epidemiological Survey
List II: (Purpose/Description)
1. A systematic collection of data from a sample of a population to measure health status or disease prevalence.
2. A database for long-term tracking of the health of a disaster-affected cohort.
3. A framework for analyzing disease causation through agent, host, and environment.
4. An assessment to quantify damages and losses to inform recovery and reconstruction needs.
Choose the correct option:
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-2, S-1
(C) P-4, Q-3, R-1, S-2
(D) P-2, Q-1, R-4, S-3

181. A 'trigger alert' for an outbreak investigation could be generated by:
(A) A scheduled national holiday.
(B) The publication of last year's health statistics.
(C) The successful completion of a vaccination campaign.
(D) A hospital reporting an unusual cluster of similar patients.

182. A common problem found during the evaluation of a surveillance system is 'low positive predictive value', which means:
(A) The system is very good at detecting true cases.
(B) Many reported cases turn out not to be true cases upon investigation.
(C) The system is very timely in its reporting.
(D) The system is very inexpensive to run.

183. Which of the following is NOT a type of biological hazard?
(A) Virus
(B) Bacterium
(C) Toxin of biological origin
(D) Corrosive acid

184. Capacity building for Rapid Response Teams involves:
(A) Reducing their salary to save money.
(B) Providing regular training and support to ensure readiness.
(C) Limiting their interaction with other health professionals.
(D) Ensuring they have no knowledge of international health regulations.

NODIA

185. The following question consists of two statements, an Assertion (A) and a Reason (R).
Assertion (A) : The uncontrolled distribution of infant formula in emergencies can be harmful.
Reason (R) : It can undermine breastfeeding, and if prepared with contaminated water or unhygienic bottles, it can lead to a high risk of diarrhea and malnutrition in infants.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

186. Which of the following best describes a 'protective factor' in disaster mental health?
(A) A pre-existing mental health condition.
(B) A factor that helps buffer against negative psychological effects.
(C) The intensity and duration of exposure to the traumatic event.
(D) A lack of access to basic necessities like food and water.

187. The management strategy for a CBRNe event is highly dependent on:
(A) The specific agent involved (Chemical,

human-animal interface.
(D) Building collapses during earthquakes.

224. Management of a radiological disaster, such as an accident at a nuclear power plant, would require specialized response capabilities for:
(A) Decontamination, monitoring exposure, and managing radiation sickness.
(B) Vector control and vaccination.
(C) Outbreak investigation of a communicable disease.
(D) Distribution of food and blankets only.

225. Place the steps for managing and analyzing data in a Health Information System in a logical order.
1. Data analysis and synthesis.
2. Data collection and transmission.
3. Information use for decision-making.
4. Data quality checks and processing.

Choose the correct sequence:
(A) 1, 2, 3, 4
(B) 2, 4, 1, 3
(C) 4, 3, 2, 1
(D) 3, 1, 4, 2

226. What does the term 'outbreak' signify in public health?
(A) The normal, expected level of a disease.
(B) A disease that has been completely eradicated.
(C) An occurrence of more cases than expected in a group or area.
(D) A synonym for a non-infectious condition like heart disease.

227. The World Health Organization's Health-EDRM framework promotes:
(A) A health-centric approach to disaster risk management.
(B) A focus on disaster response only, ignoring prevention.
(C) The idea that health is not relevant to disaster management.
(D) The construction of hospitals as the only DRR measure.

228. In an emergency, if water quality cannot be assured, the safest advice for households is to:
(A) Drink the water directly from the source.
(B) Boil the water for at least one minute before consumption.
(C) Assume the water is safe if it looks clear.
(D) Add sugar to the water to kill the germs.

229. The main purpose of a Post Disaster Needs Assessment (PDNA) in the health sector is to:
(A) Provide a comprehensive estimate of physical damages and losses.
(B) Identify individuals to be blamed for the disaster.
(C) Distribute immediate medical aid on the spot.
(D) Conduct a census of all health workers.

230. Match List I with List II regarding surveillance types.
List I: (Surveillance Type)
P. Active Surveillance
Q. Passive Surveillance
R. Sentinel Surveillance
S. Event-based Surveillance
List II: (Method)
1. Monitoring of a limited number of selected sites to gather high-quality data.
2. Routine reporting of data by health facilities as part of their regular duties.
3. Detecting potential public health events from informal sources like news media or rumors.
4. Public health staff proactively seek out data from health facilities and other sources.

Choose the correct option:
(A) P-1, Q-3, R-2, S-4
(B) P-4, Q-2, R-1, S-3
(C) P-3, Q-1, R-4, S-2
(D) P-2, Q-4, R-3, S-1

231. Agroterrorism is a subset of bioterrorism that targets:
(A) Human populations in urban centers.
(B) The economy by attacking livestock, crops, and the food supply.
(C) Computer networks and digital infrastructure.
(D) Water purification plants.

232. A disease that has appeared in a population for the first time is called:
(A) A re-emerging disease
(B) An endemic disease
(C) An emerging disease

Click Here to Buy book on Amazon

(B) 3, 4, and 5
(C) 1, 2, and 3
(D) 2, 4, and 5

196. The evaluation of a disaster program's 'impact' seeks to measure:
(A) The number of staff involved in the program.
(B) The amount of money spent on the program.
(C) Broader, long-term effects on population health and well-being.
(D) The number of meetings held during the program's planning phase.

197. The concept of "human resources for health" (HRH) includes which of the following?
(A) The number of hospital beds available.
(B) The availability of essential medicines.
(C) The skills, motivation, and deployment of health workers.
(D) The budget for health infrastructure.

198. The most important reason to have a disease control program for measles in a camp for displaced persons is that:
(A) Measles is highly contagious and has high fatality in the displaced.
(B) Measles is a water-borne disease.
(C) Measles is not preventable by vaccination.
(D) Measles only affects adults, not children.

199. What is a primary objective of improving environmental conditions in a post-disaster camp setting?
(A) To make the camp look more attractive for media reports.
(B) To reduce the transmission routes for communicable diseases.
(C) To provide employment for the construction industry.
(D) To increase the market value of the land.

200. Arrange the key steps for establishing an emergency water supply in a logical order.
1. Identify and assess potential water sources.
2. Treat, store, and distribute water to the population.
3. Estimate the water demand of the affected population.
4. Select the most feasible water source and extraction technique.

Choose the correct sequence:
(A) 3, 1, 4, 2
(B) 1, 2, 3, 4
(C) 4, 3, 2, 1
(D) 2, 4, 1, 3

201. The Health Management Information System (HMIS) is an integral part of which larger system?
(A) The national transportation system.
(B) The national education system.
(C) The national health system.
(D) The national financial system.

202. What is a 'Disaster Registry'?
(A) A legal document used to declare a disaster.
(B) A list of available emergency shelters.
(C) A system to track long-term health outcomes of survivors.
(D) A registration list for emergency response volunteers.

203. A major consideration when investigating a suspected vector-borne outbreak is to:
(A) Test all available food supplies for contamination.
(B) Analyze air quality and ventilation patterns.
(C) Interview patients only about their water consumption habits.
(D) Conduct surveys to identify the vector and breeding sites.

NODIA

204. The "E" in EWARS stands for:
(A) Economic
(B) Early
(C) Environmental
(D) Epidemiological

205. Match List I with List II regarding biological threats.
List I: (Term)
P. Biosafety
Q. Biosecurity
R. Bioterrorism
S. Biological Hazard Risk Group 4
List II: (Definition/Example)
1. The deliberate release of a pathogen to cause public harm.
2. Measures to protect pathogens from theft, loss, or intentional misuse.
3. Practices to prevent accidental infection or release of pathogens from a laboratory.

(A) Nosocomial (hospital-acquired) infections among patients and staff.
(B) The aesthetic degradation of the hospital's exterior.
(C) The hospital from making a profit.
(D) The need for a health information system.

243. Factors for the emergence of new diseases include all of the following EXCEPT:
(A) Microbial adaptation and change.
(B) International travel and commerce.
(C) Breakdown of public health measures.
(D) Universal access to clean water and sanitation.

244. "Disaster Mental Health Counselling" is best described as:
(A) Providing practical support, coping skills, and a listening ear.
(B) A long-term, intensive psychoanalysis for all survivors.
(C) The administration of sedative medications to the entire affected population.
(D) A formal legal inquiry into the cause of the disaster.

245. Which of the following are key principles of the 'One Health' concept?
1. The health of humans is separate from the health of animals and the environment.
2. Collaboration across multiple disciplines is essential.
3. It applies at local, national, and global levels.
4. Zoonotic diseases are a major area of focus for this approach.
5. The concept is exclusively focused on plant biology.

Choose the correct combination of principles.
(A) 1, 2, and 5
(B) 2, 3, and 4
(C) 1, 3, and 5
(D) 3, 4, and 5

246. The immediate priority in caring for victims of a blast (explosive) injury is:
(A) Triage and management of life-threatening trauma (the ABCs).
(B) Long-term psychological counseling.
(C) Nutritional assessment.
(D) A detailed investigation of the cause of the blast.

NODIA

247. The primary goal of ensuring safe motherhood in a disaster is to:
(A) Reduce maternal and newborn mortality and morbidity.
(B) Provide cosmetic services to pregnant women.
(C) Encourage all pregnant women to leave the disaster zone.
(D) Conduct research on the effects of stress on pregnancy.

248. The most significant risk associated with the breakdown of routine vaccination programs during a prolonged disaster is:
(A) The resurgence of vaccine-preventable diseases like measles and polio.
(B) An oversupply of vaccines in storage.
(C) A decrease in the workload for public health nurses.
(D) A reduction in the national health budget.

249. Which of the following is an example of a water-induced disease whose vector is dependent on water?
(A) Cholera
(B) Typhoid
(C) Malaria
(D) Scabies

250. Arrange the following events and frameworks in chronological order of their widespread adoption or occurrence.
1. Formulation of the International Health Regulations (IHR 2005).
2. The COVID-19 pandemic.
3. Establishment of the Global Health Security Agenda (GHSA).
4. The widespread use of the Health-EDRM framework.

Choose the correct sequence:
(A) 2, 1, 3, 4
(B) 1, 3, 4, 2
(C) 3, 4, 1, 2
(D) 4, 1, 2, 3

Direction : Please read the following source carefully.

The resilience and sustainability of health systems are paramount in the context of disaster management. A resilient health system is characterized by its capacity to prepare for,

273. The passage suggests that the methods for investigating an outbreak are primarily determined by what factor?
(A) The geographical location of the outbreak.
(B) The number of investigators available.
(C) The budget allocated for the investigation.
(D) The suspected mode of disease transmission.

274. An investigation into a suspected food-borne outbreak would likely prioritize which of the following actions?
(A) Tracing food histories of the affected individuals.
(B) Conducting entomological surveys to identify vectors.
(C) Analyzing air quality samples from the affected area.
(D) Examining the public water distribution system.

275. What is described as the overarching goal of an outbreak investigation?
(A) To publish the findings in a scientific journal.
(B) To identify a single source patient for every outbreak.
(C) To implement control measures for the prevention of future outbreaks.
(D) To only understand the descriptive epidemiology of the current cases.

Direction : Please read the following source carefully.

Public health surveillance is the continuous, systematic collection, analysis, and interpretation of health-related data needed for the planning, implementation, and evaluation of public health practice. It serves as an early warning system for impending health emergencies. Surveillance can be broadly categorized into two types: Indicator-based Surveillance, which involves the routine reporting of structured data (e.g., case numbers of specific diseases) from health facilities, and Event-based Surveillance, which focuses on the rapid capture of unstructured information about potential health risks from sources like media reports or community rumors. A robust surveillance system has several key components, including mechanisms for data collection, analysis, dissemination, and a functional response loop. In India, the Integrated Disease Surveillance Project (IDSP) exemplifies a system that integrates both types of surveillance to monitor for disease trends and outbreaks. Globally, systems like the Early Warning, Alert and Response System (EWARS) are deployed in emergency settings to facilitate rapid detection and response. Despite their importance, the design and evaluation of surveillance systems face common problems, such as under-reporting, data quality issues, and delays in analysis, which can hinder timely public health action.

Based on the above source, attempt the following five questions.

276. What is the fundamental difference between Indicator-based and Event-based Surveillance?
(A) Indicator-based surveillance uses structured data, while Event-based uses unstructured information.
(B) Indicator-based surveillance is used in emergencies, while Event-based is for non-emergencies.
(C) Indicator-based surveillance is a global system, while Event-based is a national system like IDSP.
(D) Indicator-based surveillance focuses on rumors, while Event-based focuses on official case numbers.

277. According to the passage, what is the primary function of public health surveillance?
(A) To provide direct medical treatment to patients.
(B) To manage the financial budgets of health facilities.
(C) To conduct one-time health surveys in a population.
(D) To serve as an early warning system for health emergencies.

278. The Integrated Disease Surveillance Project (IDSP) is presented as an example of:
(A) A system that relies exclusively on Event-based Surveillance.
(B) A system that integrates both Indicator-based and Event-based surveillance.
(C) A system used only for analyzing media reports.
(D) A global system that has replaced the need for EWARS.

Downloaded from www.pdf.tube

comprehensive approach for managing these health consequences. Public health preparedness involves developing plans and capacities before an emergency occurs, while response entails the actions taken to save lives and prevent further harm once a disaster strikes. Communicable diseases are significant public health threats in emergencies, and their management relies on core principles of prevention and control. This includes establishing specific disease control programmes, which themselves require rigorous monitoring, evaluation, and research to ensure their effectiveness in both emergency and non-emergency settings, thereby mitigating the health impacts of disasters.

Based on the above source, attempt the following five questions.

256. How does the passage differentiate an epidemic from a pandemic?
(A) An epidemic is constantly present, while a pandemic is a sudden increase in cases.
(B) An epidemic affects a large region, while a pandemic spreads across countries or continents.
(C) An epidemic involves non-communicable diseases, while a pandemic involves communicable diseases.
(D) An epidemic is managed by local health systems, while a pandemic is managed by the Health-EDRM Framework.

257. What is the primary purpose of the Health Emergency and Disaster Risk Management (Health-EDRM) Framework mentioned in the text?
(A) To exclusively fund the development of new communicable disease vaccines.
(B) To define the difference between an outbreak and an endemic disease.
(C) To conduct research on non-emergency disease control programmes only.
(D) To provide a comprehensive approach for managing the health consequences of disasters.

258. According to the passage, public health preparedness primarily involves:
(A) The development of plans and capacities before an emergency.
(B) The actions taken immediately after a disaster has occurred.
(C) The long-term monitoring and evaluation of disease control programmes.
(D) The global spread of a communicable disease.

NODIA

259. Which of the following is identified in the source as a significant public health threat in emergencies?
(A) The constant presence of endemic diseases.
(B) The implementation of the Health-EDRM Framework.
(C) The occurrence of communicable diseases.
(D) The process of monitoring and evaluation.

260. What does the source suggest is essential for ensuring the effectiveness of disease control programmes?
(A) Rigorous monitoring, evaluation, and research.
(B) Focusing solely on non-emergency settings.
(C) Limiting the scope to a single communicable disease.
(D) The absence of public health preparedness.

Direction : Please read the following source carefully.

In emergency situations, the provision of adequate Water, Sanitation, and Hygiene (WASH) is critical to preventing disease and protecting public health. Diseases related to poor WASH conditions, including water-borne, water-induced, and vector-borne diseases, can proliferate rapidly in disaster-affected populations. A cornerstone of effective intervention is community involvement in hygiene promotion, which empowers affected individuals to participate in their own disease prevention and mitigation. Alongside behavioral change, improving environmental conditions is essential. This encompasses several key strategies, such as ensuring both the quantity and quality of water through emergency water supply techniques and robust quality testing. Specific attention must be paid to the control of vector-borne diseases, which often requires environmental management. In contexts like a cholera outbreak, a targeted water and sanitation response is paramount. Furthermore, comprehensive WASH planning extends to hygiene and food safety, effective solid waste management, and safe excreta disposal. Planning guidelines for institutions, such as

(A) A focus on naturally occurring biological hazards.
(B) The proper management of healthcare waste.
(C) The development of specialized capacity and response protocols.
(D) The declaration of a pandemic by the GHSA.

Direction : Please read the following source carefully.

The landscape of infectious diseases is dynamic, characterized by the continual appearance of emerging and re-emerging diseases. An emerging disease is one that has appeared in a population for the first time, or that may have existed previously but is rapidly increasing in incidence or geographic range. In contrast, a re-emerging disease is one that was previously a major health problem globally or in a particular country, and then declined dramatically, but is again becoming a health problem. Numerous factors contribute to the emergence of new diseases, with the transmission of pathogens from animals to humans, known as zoonosis, being a particularly significant pathway. These zoonotic diseases represent a substantial proportion of all newly identified infectious diseases. Understanding the dynamics of both emerging and re-emerging diseases is critical for public health, as it allows for the development of surveillance and response strategies tailored to these specific threats. An overview of common emerging and re-emerging diseases reveals their diverse origins and transmission patterns, underscoring the need for a vigilant and adaptable global health security apparatus to detect and control them before they escalate into larger crises.

Based on the above source, attempt the following five questions.

286. How does the passage define a re-emerging disease?
(A) A disease appearing in a population for the very first time.
(B) A disease that is exclusively transmitted from animals to humans.
(C) A disease that is rapidly increasing its geographic range for the first time.
(D) A disease that has declined but is once again becoming a health problem.

287. What is the term used to describe the transmission of pathogens from animals to humans?
(A) Emergence.
(B) Re-emergence.
(C) Zoonosis.
(D) Incidence.

288. According to the source, which of the following is a characteristic of an emerging disease?
(A) It was always a major health problem that never declined.
(B) It is rapidly increasing in incidence or geographic range.
(C) It can only be transmitted from human to human.
(D) It is a disease that has been completely eradicated.

289. The passage emphasizes that zoonotic diseases are significant because they:
(A) are always less severe than human-specific diseases.
(B) are the only factor contributing to disease emergence.
(C) are identical to re-emerging diseases.
(D) represent a substantial portion of newly identified infectious diseases.

290. What is the implied purpose of understanding the dynamics of emerging and re-emerging diseases?
(A) To allow for the development of tailored surveillance and response strategies.
(B) To document the history of past pandemics exclusively.
(C) To focus public health efforts only on diseases transmitted by animals.
(D) To prove that all diseases eventually re-emerge.

Direction : Please read the following source carefully.

Disasters and emergencies invariably act as significant stressors on affected populations, leading to a range of mental health and psychosocial consequences. The field of disaster mental health recognizes that while many individuals exhibit normal human responses to abnormal situations, a subset will develop more severe conditions like Post-Traumatic Stress Disorder (PTSD). Key to

Click Here to Buy book on Amazon

(C) The relationship between mortality, morbidity, and exposures.
(D) The use of HMIS, PDNA, and Disaster Registries.

267. Which of the following is identified in the passage as a significant methodological challenge in disaster epidemiology?
(A) The overabundance of high-quality data.
(B) The difficulty in accessing affected populations.
(C) The lack of basic epidemiological concepts.
(D) The infrequent occurrence of disasters.

268. According to the text, what is a primary purpose of conducting a Post Disaster Needs Assessment (PDNA)?
(A) To systematically collect data on the disaster's impact.
(B) To establish a long-term Disaster Registry.
(C) To provide a framework for influenza epidemiology.
(D) To analyze the interaction between agent, host, and environment.

269. The role of epidemiology in disasters, as described in the source, includes which of the following activities?
(A) Managing the logistics of humanitarian aid distribution.
(B) Reconstructing damaged healthcare infrastructure.
(C) Rapidly assessing health needs and identifying risk factors.
(D) Providing direct clinical care to injured individuals.

270. What is the function of a Disaster Registry as mentioned in the passage?
(A) To provide immediate financial aid to disaster victims.
(B) To serve as a tool for rapid needs assessment during the disaster.
(C) To replace the need for post-disaster epidemiological surveys.
(D) To enable long-term tracking of individuals affected by a disaster.

Direction : Please read the following source carefully.

A systematic approach to outbreak investigation and response is critical for containing public health threats. An outbreak is formally defined by the occurrence of disease cases in excess of normal expectancy, and specific criteria are used to confirm its existence. The investigation process follows a series of structured steps, beginning with the confirmation of the outbreak and proceeding to case definition, descriptive epidemiology, and hypothesis generation. A critical aspect is the identification of trigger alerts, which are early warning signals that prompt an investigation. The principles and methods of investigation are tailored to the suspected mode of transmission, with distinct approaches for food-borne, water-borne, air-borne, and vector-borne outbreaks. For instance, a food-borne outbreak investigation would focus on tracing food histories and conducting laboratory analysis of food samples, whereas a vector-borne outbreak would involve entomological surveys. The overarching goal of this entire process is not just to understand the current outbreak but to implement control measures that lead to the effective prevention of future outbreaks, thereby breaking the cycle of disease transmission and protecting community health.

Based on the above source, attempt the following five questions.

271. According to the passage, what is the formal definition of an outbreak?
(A) The presence of a single case of a rare disease.
(B) Any occurrence of a vector-borne disease.
(C) A number of disease cases exceeding normal expectancy.
(D) A disease that is consistently present in a community.

272. What is the function of "trigger alerts" in the context of outbreak investigation?
(A) They are the final confirmation that an outbreak has ended.
(B) They serve as early warning signals that initiate an investigation.
(C) They are the methods used to investigate food-borne outbreaks.
(D) They are the criteria used to formally define a case.

NODIA

temporary shelters or healthcare facilities, are crucial to ensure these environments do not become epicenters for disease transmission, thereby safeguarding the health of the displaced and vulnerable.

Based on the above source, attempt the following five questions.

261. According to the passage, what is a primary reason for prioritizing Water, Sanitation, and Hygiene (WASH) in emergencies?
(A) To facilitate long-term infrastructure development projects.
(B) To exclusively manage the disposal of solid waste.
(C) To focus only on improving water quantity.
(D) To prevent the rapid proliferation of related diseases.

262. What approach is highlighted as a "cornerstone" of effective WASH intervention in the source?
(A) The exclusive use of emergency water supply techniques.
(B) The active involvement of the community in hygiene promotion.
(C) The immediate implementation of institutional planning guidelines.
(D) The sole focus on controlling vector-borne diseases.

263. The passage indicates that in the event of a cholera outbreak, the most critical response is:
(A) A general focus on hygiene and food safety.
(B) The implementation of solid waste management plans.
(C) A targeted water and sanitation intervention.
(D) A long-term study of vector-borne diseases.

264. Which of the following is NOT explicitly mentioned as a component of improving environmental conditions in a WASH emergency response?
(A) Ensuring water quantity and quality.
(B) Managing solid waste and excreta disposal.
(C) Controlling vectors responsible for disease transmission.
(D) Implementing financial incentives for hygiene practices.

265. What is the main purpose of having WASH planning guidelines for institutions in an emergency, as suggested by the text?
(A) To prevent these locations from becoming centers of disease transmission.
(B) To ensure the architectural appeal of temporary shelters.
(C) To secure long-term funding for the institutions.
(D) To standardize food menus in healthcare facilities.

Direction : Please read the following source carefully.

Disaster epidemiology applies epidemiological methods to understand the health impacts of disasters and inform response efforts. At its core, it utilizes basic epidemiological concepts, including the epidemiological triad—the interplay between an agent, a host, and the environment—to analyze disease patterns in post-disaster settings. The role of epidemiology in disasters is multifaceted, involving the rapid assessment of health needs, identification of risk factors, and surveillance of health outcomes. However, practitioners face significant methodological challenges, such as difficulties in accessing affected populations and ensuring data quality in chaotic environments. Key areas of focus include measuring disaster-related exposures and quantifying mortality and morbidity to understand the event's full impact. Tools like the Health Management Information System (HMIS) and the Post Disaster Needs Assessment (PDNA) are vital for systematic data collection. Furthermore, Disaster Registries can be established for long-term tracking of affected individuals. Conducting post-disaster epidemiological surveys and investigations, such as those for influenza epidemiology, provides crucial evidence for immediate response and future preparedness, helping to mitigate the adverse health consequences of subsequent events.

Based on the above source, attempt the following five questions.

266. What does the "epidemiological triad" refer to in the context of disaster epidemiology?
(A) The process of post-disaster needs assessment, surveys, and investigations.
(B) The interplay between an agent, a host, and the environment.

Downloaded from www.pdf.tube

279. Which of the following is mentioned as a common problem affecting surveillance systems?
(A) The over-reporting of disease cases.
(B) The excessively rapid analysis of data.
(C) Delays in data analysis that can hinder timely action.
(D) The lack of any data collection mechanisms.

280. What is the role of the Early Warning, Alert and Response System (EWARS) as described in the source?
(A) To replace national surveillance systems like IDSP.
(B) To manage routine reporting of structured data from clinics.
(C) To analyze community rumors for non-health-related events.
(D) To facilitate rapid detection and response in emergency settings.

Direction : Please read the following source carefully.

Biological disasters, including large-scale infectious disease events like epidemics and pandemics, represent significant public health emergencies. Managing these threats requires a comprehensive approach encompassing prevention, mitigation, preparedness, response, and recovery. A key element in this cycle is the implementation of early warning and containment strategies to limit the spread of a biological agent. The nature of these threats can range from naturally occurring biological hazards, which are classified into risk groups based on their pathogenicity, to deliberate acts such as biological warfare and bioterrorism. Addressing the latter requires specific capacity building and response protocols. Crucial to both scenarios are the principles of biosafety (protecting people from germs) and biosecurity (protecting germs from people). The management of healthcare and biomedical waste is also a critical component to prevent secondary transmission. International cooperation is vital, governed by frameworks like the International Health Regulations (IHR), which define countries' obligations in reporting Public Health Emergencies of International Concern (PHEIC). Initiatives like the Global Health Security Agenda (GHSA) aim to build global capacity to prevent, detect, and respond to infectious disease threats, often involving the deployment of Rapid Response Teams.

Based on the above source, attempt the following five questions.

NODIA

281. What is the fundamental difference between biosafety and biosecurity as implied in the passage?
(A) Biosafety is about protecting people from pathogens, while biosecurity is about protecting pathogens from misuse.
(B) Biosafety deals with natural hazards, while biosecurity deals with bioterrorism.
(C) Biosafety is managed locally, while biosecurity is managed internationally through IHR.
(D) Biosafety involves healthcare waste, while biosecurity involves agroterrorism.

282. The International Health Regulations (IHR) are described as a framework that:
(A) Classifies biological hazards into risk groups.
(B) Defines countries' obligations for reporting major public health events.
(C) Directly manages the deployment of Rapid Response Teams.
(D) Funds the Global Health Security Agenda (GHSA).

283. According to the source, what is the primary purpose of early warning and containment strategies in a biological disaster?
(A) To classify the biological agent into a risk group.
(B) To limit the spread of the biological agent.
(C) To manage the disposal of biomedical waste.
(D) To build capacity for bioterrorism response.

284. A Public Health Emergency of International Concern (PHEIC) is a term associated with which of the following?
(A) The International Health Regulations (IHR).
(B) The Global Health Security Agenda (GHSA).
(C) Localized containment strategies.
(D) The principles of biosafety.

285. The passage suggests that addressing threats from biological warfare and bioterrorism specifically requires:

Antimicrobial Resistance (AMR) pose a slow-burning but significant threat to global health security. In the immediate aftermath of a crisis, ensuring nutrition, food safety, and the care of road traffic injury victims are critical. Specialized needs are addressed through protocols like the Minimum Initial Service Package (MISP) for Sexual and Reproductive Health (SRH), which ensures vital services are available from the onset of an emergency.

Based on the above source, attempt the following five questions.

296. What is the core principle of the One Health concept as described in the passage?
(A) Human health is independent of animal and environmental health.
(B) It is a framework exclusively for managing CBRNe disasters.
(C) It prioritizes animal health over human and environmental health.
(D) The health of people, animals, and the environment are closely connected.

297. The Minimum Initial Service Package (MISP) is a protocol designed to address what specific need in an emergency?
(A) The provision of Sexual and Reproductive Health services.
(B) The management of road traffic injuries.
(C) The containment of Antimicrobial Resistance.
(D) The response to a Chemical, Biological, Radiological, Nuclear, and explosive (CBRNe) event.

298. According to the source, why is a One Health approach considered critical for disaster preparedness?
(A) Because it focuses solely on ensuring nutrition and food safety.
(B) Because many health threats, like emerging diseases, originate at the human-animal-environment interface.
(C) Because it provides all the necessary funding for disaster response.
(D) Because it is the only framework that addresses Antimicrobial Resistance.

299. What does the acronym CBRNe stand for in the context of disaster management?
(A) Community-Based Rehabilitation and Nutritional enhancement.
(B) Chemical, Biological, Radiological, Nuclear, and explosive.
(C) Critical Biological Resources and National emergencies.
(D) Care, Breeding, and Rearing of National livestock.

300. The passage suggests that the One Health approach promotes which type of work?
(A) Collaborative, multisectoral, and transdisciplinary work.
(B) Work that is isolated within a single professional discipline.
(C) Work that is solely conducted at the local level.
(D) Work that focuses only on immediate disaster response.

www.nodia.in

Click Here to Buy book on Amazon

providing effective support is understanding the interplay of stressors and protective factors that influence an individual's psychological outcome. A spectrum of interventions is available, tailored to different needs and phases of the disaster response. Psychological First Aid (PFA) is a humane, supportive response to a person who is suffering and may need support; it is a critical early intervention. For individuals with more developed symptoms, evidence-based treatments like Cognitive Behavioral Therapy (CBT) may be appropriate. Beyond individual care, Community-Based Interventions are vital for leveraging social support networks and promoting collective resilience. Disaster Mental Health Counselling offers a more formal therapeutic process. A crucial, though sometimes controversial, intervention is Psychological Debriefing. The overall goal is to provide a continuum of care, from immediate support to long-term therapy, while also managing the stress and promoting the well-being of the responders themselves.

Based on the above source, attempt the following five questions.

291. What is Psychological First Aid (PFA) described as in the passage?
(A) A long-term therapy for treating diagnosed PTSD.
(B) A community-based intervention focused on social networks.
(C) A humane and supportive early intervention for those who are suffering.
(D) A mandatory debriefing session for all disaster responders.

292. The source suggests that Post-Traumatic Stress Disorder (PTSD) is:
(A) A more severe mental health condition that can develop in a subset of the affected population.
(B) A normal human response experienced by everyone after a disaster.
(C) A condition that can only be treated with Community-Based Interventions.
(D) An outcome that is independent of stressors and protective factors.

293. Which intervention is mentioned as being appropriate for individuals with more developed psychological symptoms?
(A) Psychological First Aid (PFA).
(B) General measures for managing stress.
(C) Initial disaster mental health assessment.
(D) Cognitive Behavioral Therapy (CBT).

294. According to the passage, what is the role of Community-Based Interventions in disaster mental health?
(A) To replace the need for individual therapies like CBT.
(B) To leverage social support and promote collective resilience.
(C) To provide formal Disaster Mental Health Counselling.
(D) To exclusively manage the well-being of disaster responders.

295. The passage implies that the field of disaster mental health is concerned with:
(A) Only treating diagnosed cases of PTSD.
(B) The psychological well-being of the affected population, but not the responders.
(C) A spectrum of support, from immediate aid to long-term therapy.
(D) Only one type of intervention, such as Psychological Debriefing.

Direction : Please read the following source carefully.

Modern approaches to disaster management increasingly recognize the intricate connections between human, animal, and environmental health. The One Health concept provides a foundational framework for this integrated perspective, asserting that the health of people is closely connected to the health of animals and our shared environment. Implementing a One Health approach is critical for disaster preparedness, as many health threats, particularly emerging infectious diseases, originate at the human-animal-environment interface. This approach promotes collaborative, multisectoral, and transdisciplinary work—at the local, regional, national, and global levels—to achieve optimal health outcomes. Beyond One Health, other emerging issues demand attention within health and disaster risk reduction frameworks. This includes the management of complex CBRNe (Chemical, Biological, Radiological, Nuclear, and explosive) disasters, which require highly specialized strategies. Furthermore, issues like

Downloaded from www.pdf.tube

absorb, adapt to, and transform in the face of shocks and stresses, such as disasters. This involves a multi-faceted infrastructure that includes robust national and local health systems, organized into distinct tiers of healthcare services to ensure accessibility and appropriate levels of care. Critical to this infrastructure are the clinical services that form the frontline of response, and a sophisticated Health Information System (HIS) that enables real-time data collection, analysis, and decision-making. Furthermore, the availability and strategic deployment of Human Resources for Health (HRH) are indispensable for operational continuity. The efficacy of these systems is not static; it requires continuous monitoring and evaluation, not only of the health system's performance but also of specific disaster programs and projects. This evaluative process is crucial for identifying weaknesses, fostering learning, and guiding the development of more resilient and sustainable health systems capable of withstanding future catastrophic events. The goal is to build an infrastructure that does not just recover to its previous state but evolves to a higher level of functioning post-disaster.

Based on the above source, attempt the following five questions.

251. According to the passage, what is the primary characteristic of a resilient health system?
(A) Its reliance solely on national-level clinical services.
(B) Its capacity to manage shocks and stresses through preparation, absorption, and adaptation.
(C) Its ability to function without a Health Information System.
(D) Its focus on post-disaster recovery to its original state.

252. Which component is described as indispensable for the operational continuity of a health system during a disaster?
(A) The availability and deployment of Human Resources for Health.
(B) The evaluation of past disaster projects.
(C) The division of healthcare into tiers.
(D) The architectural design of clinical facilities.

253. What role does a Health Information System (HIS) play within a resilient health infrastructure as per the source?
(A) It primarily manages the financial aspects of clinical services.
(B) It is exclusively used for monitoring human resources.
(C) It enables real-time data analysis for informed decision-making.
(D) It serves as a replacement for tiered healthcare services.

254. The passage suggests that the ultimate goal of building a resilient health system post-disaster is to:
(A) Replicate the pre-disaster system exactly.
(B) Reduce the number of healthcare tiers.
(C) Focus exclusively on monitoring and evaluation.
(D) Evolve to a higher level of functioning and capacity.

NODIA

255. Based on the source, what is the key function of monitoring and evaluation in the context of disaster programs?
(A) To secure funding for future disaster projects.
(B) To assign accountability for failures in clinical services.
(C) To identify weaknesses and guide the development of more sustainable systems.
(D) To manage the daily schedules of human resources for health.

Direction : Please read the following source carefully.

The domain of disaster health is concerned with the immediate and long-term health consequences of disasters, which necessitates a structured approach to public health preparedness and response. Central to understanding disease dynamics in this context is the differentiation between an endemic disease, which is constantly present in a certain population; an outbreak, a sudden increase in cases above what is normally expected; an epidemic, a more widespread outbreak affecting a larger region; and a pandemic, an epidemic that has spread over several countries or continents. The Health Emergency and Disaster Risk Management (Health-EDRM) Framework provides a

ANSWERS

1. (B) To provide a framework for generating, analyzing, and disseminating health data for decision-making.
A Health Information System provides a structured mechanism for the continuous collection, processing, and interpretation of health-related statistics within a national framework. This system ensures that healthcare professionals and policy makers have access to reliable evidence for strategic planning and resource allocation. By facilitating the dissemination of analyzed data, it supports effective decision-making across all levels of the health sector, ultimately improving service delivery and patient outcomes.

2. (A) Epidemic
An epidemic represents a sudden and significant increase in the incidence of a specific disease within a defined geographical area or population group. This occurrence surpasses the typical baseline levels expected for that time and location. Effective public health response involves identifying the source of transmission and implementing immediate control measures to curb further spread. Timely recognition is essential for preventing the escalation into a larger crisis.

3. (C) Focusing exclusively on long-term chronic disease management.
During emergency situations, public health priorities shift toward managing immediate threats such as infectious disease outbreaks. While long-term care remains relevant, the primary focus is on rapid detection, timely response, and ensuring access to essential hygiene and sanitation services. Concentrating solely on chronic conditions neglects the urgent need to stabilize the population against communicable pathogens. Comprehensive strategies must balance acute interventions with necessary long-term healthcare infrastructure for resilience.

4. (D) Encouraging regular handwashing with soap at critical times.
Promoting regular handwashing with soap at critical moments serves as a fundamental strategy for reducing the transmission of water-related and faecal-oral diseases. In displaced populations, where living conditions are often crowded and sanitation is compromised, this simple behavioral change can significantly lower morbidity rates. Educational interventions should focus on ensuring community members understand the link between hygiene practices and health outcomes, fostering a culture of prevention.

5. (A) P-2, Q-4, R-1, S-3
Primary healthcare serves as the initial contact point, offering essential preventive and curative services. Secondary healthcare involves specialized facilities like general hospitals that manage referred cases. Tertiary care provides advanced, highly specialized consultative services for complex medical issues. Clinical services encompass the hands-on diagnosis and treatment provided directly to patients. Understanding these distinct tiers is vital for organizing an efficient health system that addresses varying levels of medical complexity.

6. (B) The interplay of an external agent, a susceptible host, and an environment.
The epidemiological triad is a foundational model used to understand the transmission of infectious diseases. It illustrates the dynamic relationship between an external agent, a susceptible host, and the surrounding environment. Disease occurs when these three factors interact in a way that favors the pathogen. Analyzing these components allows public health officials to identify intervention points, such as neutralizing the agent, protecting the host, or modifying environmental conditions.

7. (D) To estimate damage and define strategies for recovery and reconstruction.
A Post Disaster Needs Assessment is conducted to quantify the physical damages and economic losses sustained within the health sector following a catastrophe. This comprehensive evaluation identifies the most urgent requirements for restoring services and building

Click Here to Buy book on Amazon

49. (B) Utilizing community resources to promote collective well-being and resilience.
Community-based interventions for psychosocial support involve identifying and utilizing existing local resources to promote collective well-being and strengthen resilience in the aftermath of a disaster. These interventions focus on empowering the community to support its members through social networks, local leaders, and traditional coping mechanisms. By fostering a sense of solidarity and mutual aid, these programs help reduce the overall psychological impact of the crisis. This approach ensures that support is culturally appropriate and sustainable over the long term.

50. (A) 1, 3, 2, 4
The WHO framework for managing pandemics typically follows a sequence through the interpandemic, alert, pandemic, and transition phases. The interpandemic phase focuses on routine preparedness, while the alert phase involves monitoring emerging threats. The pandemic phase represents the period of widespread global transmission requiring intensive response measures. Finally, the transition phase focuses on recovery and adaptation as the threat subsides. This structured approach ensures that countries are prepared to implement appropriate public health actions at each stage of a global crisis.

51. (C) Support continuous quality improvement and evidence-based decision-making.
The monitoring and evaluation of health systems are cyclical processes aimed at supporting continuous quality improvement and evidence-based decision-making. By systematically assessing service delivery and outcomes, health managers can identify strengths and weaknesses within the system. This feedback loop allows for the adjustment of strategies and resource allocation to better meet the needs of the population. Ultimately, these processes ensure that health services are effective, efficient, and responsive to the challenges posed by both routine care and emergency situations.

52. (B) Preparedness and Mitigation
Within the Health-EDRM framework, the preparedness and mitigation component involves actions taken in advance of a disaster to reduce its potential impact on health. Mitigation focuses on reducing the underlying risk factors and vulnerabilities, while preparedness involves developing the capacity to respond effectively when a disaster occurs. These proactive measures include strengthening health infrastructure, training personnel, and establishing early warning systems. By investing in these areas, communities can significantly decrease the morbidity and mortality associated with various hazards.

53. (D) 3-5 liters
In the immediate aftermath of an emergency, the generally accepted minimum quantity of safe water needed per person per day for survival is three to five liters. This basic amount is intended primarily for drinking and food preparation to prevent dehydration and maintain essential biological functions. While larger quantities are needed for full hygiene and sanitation in the long term, ensuring this minimum survival level is the highest priority during the initial phase of a humanitarian crisis to protect vulnerable populations.

54. (A) To immediately prosecute those at fault for the disaster.
Post-disaster epidemiological investigations are primarily focused on identifying risk factors for death and injury and evaluating the effectiveness of relief efforts. These studies provide critical evidence for planning future disaster responses and improving public health strategies. They are scientific and humanitarian in nature, rather than legal or punitive. By understanding the health impacts of a disaster, epidemiologists can help ensure that resources are used more effectively to protect lives and build resilience in vulnerable communities for subsequent events.

55. (B) P-3, Q-4, R-1, S-2
A case definition provides standard criteria for identifying individuals with the condition of interest during an outbreak investigation. A line listing organizes key data for each case in a table for analysis. The epidemic curve is a visual representation of case onset over time, helping to identify the outbreak's pattern. A hypothesis is a testable theory about the likely source or transmission route. These tools are essential for

NODIA

reducing the transmission of HIV. This set of high-priority activities ensures that life-saving reproductive health services are available before more comprehensive care can be established. It prioritizes the most vulnerable groups in emergency settings.

15. (B) 2 and 4 only
The Health Emergency and Disaster Risk Management framework provides a comprehensive approach that covers all phases of the disaster cycle, including prevention, preparedness, response, and recovery. Its fundamental objective is to reduce the health risks and negative consequences associated with emergencies. By integrating community resilience and multisectoral cooperation, the framework aims to build stronger and more responsive health systems. It moves beyond a simple reactive model to include proactive risk reduction strategies.

16. (B) A sudden increase in cases above what is normally expected in a specific area.
An outbreak is defined as a sudden and unexpected rise in the number of disease cases within a specific population or geographic area. This increase is measured against the normal baseline levels typically observed in that context. Identifying an outbreak requires vigilant surveillance and prompt investigation to determine the cause and implement control measures. Timely intervention is crucial for preventing the localized occurrence from escalating into a widespread epidemic or a global pandemic.

17. (B) Rabies
Zoonotic diseases are infections that can be transmitted naturally from vertebrate animals to humans. Rabies serves as a classic example, as it is typically spread through the saliva of infected animals via bites or scratches. Preventing these diseases requires a multisectoral approach that involves animal health, public health, and environmental management. Effective control strategies often include animal vaccination programs and public education regarding safe interactions with wildlife and domestic animals to reduce spillover.

18. (A) To offer a humane, supportive, and practical response to people in crisis.
Psychological First Aid focuses on providing immediate, practical, and non-intrusive support to individuals in the aftermath of a traumatic event. The goal is to provide comfort, ensure physical safety, and help people access basic needs and social support. Unlike clinical therapy, it does not involve diagnosing mental disorders or forcing survivors to discuss their experiences. It is a humane response designed to stabilize emotions and foster natural coping mechanisms during the initial crisis.

19. (C) Nuclear
In the context of emergency management, the acronym CBRNe stands for Chemical, Biological, Radiological, Nuclear, and high-yield Explosives. The letter N specifically represents nuclear threats, which involve incidents related to nuclear power facilities or the use of nuclear weapons. These disasters require specialized response protocols, including decontamination and long-term monitoring for radiation exposure. Preparedness for such events involves inter-agency collaboration and the use of sophisticated detection and protective equipment for responders.

20. (B) 2, 3, and 4
Containment strategies are essential for controlling the spread of infectious diseases during biological disasters. Agroterrorism involves the deliberate use of pathogens to target livestock or crops, threatening food security and the economy. The International Health Regulations represent a legally binding framework that guides countries in managing acute public health risks with international implications. Effective response to these emergencies requires a combination of clinical care, surveillance, and legal cooperation to ensure a coordinated global defense against pathogens.

21. (C) Assess the relevance, effectiveness, efficiency, and impact of the intervention.
Assessing the relevance, effectiveness, efficiency, and impact of an intervention is the primary goal of disaster program evaluation. This process involves a systematic review of whether the program achieved its stated objectives and provided value for the resources utilized. By

Downloaded from www.pdf.tube

the risk of morbidity and mortality. Therefore, ensuring diagnostic precision allows for targeted control measures, protecting the population and ensuring the most efficient use of healthcare infrastructure during an emergency.

36. (D) Passive surveillance
Passive surveillance involves the routine and regular reporting of disease cases by healthcare facilities to central health authorities as part of their standard duties. While this method is cost-effective and provides a broad overview of health trends, it often suffers from under-reporting and delays. Nevertheless, it remains the most common form of surveillance worldwide. It serves as a baseline system for monitoring disease prevalence and can highlight unusual patterns that warrant more intensive investigation or active surveillance measures.

37. (C) The agent's pathogenicity, transmission, and preventive measures.
The risk group classification for biological hazards is determined by assessing the pathogenicity of the agent, the ease with which it can be transmitted, and the availability of effective preventive or therapeutic measures. Agents in higher risk groups pose a greater threat to individual and public health and require more stringent containment facilities and laboratory practices. This systematic categorization helps ensure that research and diagnostic work involving dangerous pathogens are conducted safely, minimizing the risk of accidental exposure or release.

38. (B) Indifference phase
The psychological response of a community to a disaster typically progresses through several recognized phases, including the heroic, honeymoon, disillusionment, and reconstruction phases. The heroic phase occurs immediately after the impact, followed by a sense of community bonding in the honeymoon phase. Disillusionment arises as delays and difficulties in recovery emerge. Finally, the reconstruction phase involves long-term adaptation. Indifference is not a recognized stage in this framework, as disasters generally evoke strong emotional responses and significant community engagement.

NODIA

39. (D) Identifying hazards, analyzing the risks associated with them, and evaluating their potential impact.
Risk assessment within a health organization is a proactive process that involves identifying potential hazards and analyzing the likelihood and severity of their associated risks. This systematic evaluation allows the organization to prioritize threats and implement appropriate mitigation strategies. By understanding the potential impact on patient safety and service continuity, health managers can make informed decisions about resource allocation and emergency planning. Effective risk assessment is essential for building a resilient healthcare system capable of managing various internal and external shocks.

40. (B) 2 and 3 only
Sharps, including used needles and scalpels, represent a significant portion of infectious biomedical waste and pose a high risk of injury and infection to healthcare workers. Improper management of this waste can lead to the transmission of blood-borne pathogens within both medical facilities and the broader community. While general office waste is generated in hospitals, it is not classified as biomedical waste. Safe disposal requires segregation, appropriate treatment, and specialized containers to minimize risks and ensure environmental safety.

41. (C) The workforce including doctors, nurses, and community health workers.
Human resources for health refers to the entire workforce dedicated to the provision of healthcare services, including doctors, nurses, midwives, and community health workers. This workforce is the most critical component of any health system, as their skills and dedication directly determine the quality of care provided. Managing human resources effectively involves ensuring appropriate training, fair distribution, and adequate support, especially during emergencies. A well-supported and motivated health workforce is essential for achieving universal health coverage and responding to crises.

42. (A) To ensure the capacity of the system to manage health effects.
The primary goal of public health preparedness is to ensure that the healthcare system has the

infrastructure. Monitoring these diseases is crucial for preventing them from regaining their previous status as a widespread threat to population health and stability.

29. (C) Cognitive Behavioral Therapy (CBT)
Cognitive Behavioral Therapy is a structured psychosocial intervention designed to help individuals manage their thoughts, feelings, and behaviors following a traumatic event. It focuses on identifying and challenging maladaptive thinking patterns and developing healthy coping strategies. In the context of disaster mental health, this evidence-based approach is used to treat conditions such as anxiety, depression, and post-traumatic stress disorder. It empowers survivors to regain a sense of control and improve their overall psychological well-being during recovery.

30. (B) P-3, Q-4, R-2, S-1
Bioterrorism involves the deliberate release of pathogens to harm humans, animals, or plants, whereas agroterrorism specifically targets the agricultural sector to cause economic disruption. A biological hazard is any material with potential to cause harm, while a pandemic is an infectious disease outbreak that spreads across a large region or worldwide. Understanding these definitions is essential for developing targeted preparedness strategies and national security policies. These concepts highlight the diverse nature of biological threats in modern society.

31. (A) The capacity to absorb, adapt, and transform to cope with shocks.
A resilient health system possesses the fundamental capacity to absorb the shock of a disaster while maintaining essential services. Beyond mere resistance, it must be able to adapt its functions and structures to meet changing needs and ultimately transform into a stronger system. Resilience involves proactive planning, robust infrastructure, and the ability to mobilize resources quickly. This dynamic capability ensures that the health system can protect the population even under extreme stress and recover efficiently.

32. (B) Disasters consistently lead to a decrease in the incidence of vector-borne diseases due to environmental disruption.
Disasters often create environmental conditions that significantly increase the risk of vector-borne diseases. For instance, flooding can leave stagnant water that serves as ideal breeding grounds for mosquitoes, leading to outbreaks of malaria or dengue fever. Disruption of sanitation systems and displacement of populations into crowded shelters further exacerbate these risks. Therefore, the assertion that disasters consistently decrease vector-borne diseases is incorrect. Effective disaster management must include robust vector control strategies to protect the health of affected communities.

33. (B) To prevent the contamination of water sources and the spread of faecal-oral diseases.
In emergency settings, safe excreta disposal is a critical priority for preventing the transmission of faecal-oral diseases such as cholera and dysentery. Improper management of human waste can quickly lead to the contamination of limited water sources, especially in crowded displaced persons camps. Establishing effective sanitation facilities provides a barrier between pathogens and the population. This fundamental component of hygiene promotion is essential for maintaining public health and reducing morbidity and mortality rates during a humanitarian crisis.

34. (A) A database of individuals used for long-term health monitoring and research.
A Disaster Registry is a specialized database that collects information on individuals who have been exposed to a particular disaster or hazardous event. The primary purpose of such a registry is to facilitate long-term health monitoring and research into the delayed effects of exposure. By tracking a specific cohort over time, health authorities can identify emerging trends, assess the effectiveness of interventions, and provide targeted support to those at risk. It is a vital tool for disaster epidemiology.

35. (A) Both A and R are true and R is the correct explanation of A.
Rapid and accurate diagnosis is a cornerstone of effective outbreak investigation. Without a clear understanding of the causative agent, public health authorities may implement inappropriate interventions that fail to stop the spread of the disease. Misdiagnosis also leads to the wasteful allocation of limited resources and can increase

Click Here to Buy book on Amazon

back better. By providing evidence-based data, it helps governments and international partners prioritize recovery strategies and allocate resources effectively. The ultimate goal is to ensure long-term resilience and sustainable health system reconstruction.

8. (A) Systematic collection, analysis, and dissemination of data on epidemic-prone diseases.
The Integrated Disease Surveillance Project focuses on the continuous and systematic gathering of health data to monitor epidemic-prone conditions. By analyzing and disseminating this information, the program enables early detection of potential outbreaks and facilitates a rapid public health response. This decentralized approach ensures that data from various levels of the health system are integrated, providing a comprehensive overview of the national health landscape and enhancing overall disease control efforts.

9. (C) Public Health Emergency of International Concern
A Public Health Emergency of International Concern is a formal declaration by the World Health Organization regarding an extraordinary event. Such events are characterized by their potential to pose a significant risk to multiple countries through the international spread of disease. This designation necessitates a coordinated international response to mitigate the threat and prevent further transmission. It serves as a critical mechanism under the International Health Regulations for global cooperation.

10. (A) Both A and R are true and R is the correct explanation of A.
Systematic monitoring and evaluation are indispensable for assessing the impact and efficiency of disaster health initiatives. These processes provide critical feedback by identifying successful interventions and highlighting areas requiring improvement. By utilizing evidence-based data, organizations can make informed adjustments to their strategies and planning for future events. This continuous cycle of assessment and correction ensures that resources are used effectively to achieve the best possible health outcomes for affected populations.

11. (D) Microbial adaptation and change, often due to human activity.
The emergence of new infectious diseases is frequently driven by the ability of microorganisms to adapt and evolve in response to changing conditions. Human activities, such as intensive agriculture, urbanization, and the misuse of antimicrobial agents, create environments that favor these genetic transformations. These changes can enhance the pathogenicity of microbes or allow them to cross species barriers. Understanding these evolutionary processes is vital for developing effective surveillance and prevention strategies.

NODIA

12. (B) Post-Traumatic Stress Disorder
Post-Traumatic Stress Disorder is a psychiatric condition that can develop in individuals who have experienced or witnessed a terrifying or life-threatening event. Symptoms typically include intrusive memories, flashbacks, severe anxiety, and emotional distress. In the context of disaster health, early identification and access to specialized psychological support are essential for recovery. Providing a supportive environment and evidence-based interventions can significantly mitigate the long-term mental health consequences for survivors and responders.

13. (C) Humans, animals, and the environment.
The One Health concept recognizes that the well-being of humans is inextricably linked to the health of animals and the integrity of the shared environment. This collaborative approach involves professionals from various sectors working together to address complex health threats, such as zoonotic diseases and antimicrobial resistance. By considering these interconnections, public health strategies can be more comprehensive and effective. This holistic perspective is essential for preventing outbreaks and ensuring global health security.

14. (D) To manage sexual violence consequences and reduce HIV transmission.
The Minimum Initial Service Package for Sexual and Reproductive Health is designed to be implemented at the beginning of a crisis. Its primary objectives include managing the consequences of sexual violence, preventing excess maternal and newborn mortality, and

necessary capacity and resources to manage the health consequences of a disaster effectively. This involves proactive planning, training personnel, stockpiling essential supplies, and establishing robust communication networks. Preparedness aims to minimize morbidity and mortality by enabling a rapid and coordinated response. By identifying potential vulnerabilities before a crisis occurs, health authorities can implement measures that enhance overall system resilience and protect the community.

43. (D) Cholera
Cholera is an acute diarrheal infection caused by the ingestion of contaminated food or water. It is directly linked to inadequate sanitation and lack of access to clean water, making it a major concern in emergency settings like displaced persons camps. Outbreaks can spread rapidly in crowded conditions with poor hygiene practices. Controlling cholera requires immediate interventions focused on providing safe water, improving sanitation facilities, and promoting handwashing. Timely treatment with oral rehydration therapy is essential for reducing mortality during an outbreak.

44. (B) Determine the prevalence and incidence of diseases and injuries.
Epidemiological surveys conducted in the aftermath of a disaster are essential for determining the prevalence and incidence of diseases and injuries within the affected population. These surveys provide critical data for assessing the overall health impact and identifying the most urgent needs. By quantifying health outcomes, authorities can prioritize resource allocation and evaluate the effectiveness of relief efforts. This evidence-based approach ensures that interventions are targeted toward the most significant health threats, ultimately improving the recovery process.

45. (C) 1, 2, and 4
Investigating a foodborne outbreak requires securing and testing suspect food samples to identify the causative pathogen. Standard methods include interviewing both ill and well persons to identify common dietary exposures and determine the likely source of contamination. Creating a detailed line listing of cases, including symptoms and onset times, allows for a comprehensive analysis of the outbreak's magnitude and duration. These steps are essential for implementing effective control measures and preventing further illness within the community during an emergency.

NODIA

46. (D) To support detection and response to disease outbreaks.
The Early Warning, Alert and Response System is specifically designed to support the rapid detection and response to disease outbreaks in emergency settings. It provides a structured mechanism for health workers to report unusual health events, enabling authorities to initiate investigations quickly. By facilitating early detection, the system helps contain potential epidemics before they spread widely. This proactive approach is vital for reducing morbidity and mortality in vulnerable populations, ensuring that life-saving interventions are implemented in a timely and effective manner.

47. (A) Containment principles and practices implemented to prevent pathogen exposure.
Biosafety refers to the set of containment principles, laboratory practices, and safety equipment implemented to prevent the accidental exposure of laboratory workers or the environment to infectious agents. It focuses on ensuring that dangerous pathogens are handled in a controlled manner to minimize the risk of infection. Different biosafety levels are established based on the pathogenicity of the agents being studied. Maintaining rigorous biosafety standards is essential for public health, especially when working with emerging or highly contagious diseases.

48. (B) Becoming a health problem again for a significant proportion of the population.
A re-emerging disease is an infectious condition that was previously a major health concern, saw a dramatic decline due to successful public health interventions, but is now resurging in incidence. This return to prominence can be driven by factors such as the development of antimicrobial resistance or a breakdown in immunization programs. These diseases pose a significant challenge because the population may have lost previous immunity. Monitoring and addressing the drivers of re-emergence are vital for maintaining global health security.

measuring long-term outcomes and immediate outputs, evaluators can provide actionable recommendations for improving future responses. This ensures that humanitarian aid is delivered in a transparent, accountable, and sustainable way.

22. (A) Pandemic
A pandemic is an outbreak of an infectious disease that has spread across a large region, typically multiple countries or continents, and affects a significant proportion of the population. This classification signifies a global health crisis requiring international coordination and cooperation. Managing a pandemic involves implementing widespread public health measures, such as social distancing, travel restrictions, and mass vaccination, to mitigate the impact on healthcare systems and reduce overall mortality rates worldwide.

23. (D) Using insecticide-treated nets (ITNs) and indoor residual spraying (IRS).
Controlling vector-borne diseases like malaria in emergency settings primarily relies on reducing contact between humans and disease-carrying insects. The use of insecticide-treated nets provides a physical and chemical barrier, especially during sleep. Indoor residual spraying involves treating internal wall surfaces with insecticide to kill mosquitoes that rest there. These interventions are highly effective in crowded displaced persons camps where environmental conditions often favor vector breeding, significantly reducing the transmission and prevalence of malaria.

24. (A) Defining the affected population and ensuring accurate data collection.
In the aftermath of a disaster, defining the precisely affected population and ensuring accurate data collection present significant methodological challenges for epidemiologists. Disruption of normal record-keeping systems and the movement of displaced persons can lead to incomplete or biased information. Accurate data are essential for measuring morbidity and mortality and for planning effective relief interventions. Overcoming these obstacles requires innovative surveillance techniques and rapid assessment tools to capture a realistic picture of health needs.

25. (A) 2, 1, 3, 4
A systematic outbreak investigation begins with verifying the diagnosis and confirming that an actual outbreak exists. Once established, cases must be defined and identified to understand the scope of the problem. Describing data in terms of time, place, and person allows for the visualization of the epidemic curve and geographical spread. Finally, investigators develop and evaluate hypotheses regarding the source and transmission of the disease, enabling the implementation of targeted and effective control measures.

26. (A) Analyzing unstructured information from media reports and community rumors.
Event-based surveillance relies on the rapid capture and analysis of unstructured information from informal sources such as media reports, social media, and community rumors. This approach complements traditional indicator-based systems by providing early warning signals of potential public health threats that may not yet be captured in formal records. It is particularly valuable in the early stages of an outbreak, allowing health authorities to investigate and respond to emerging risks before they escalate.

27. (D) Implementing non-pharmaceutical interventions like social distancing.
During the early phase of a pandemic, when vaccines and specific treatments may not yet be available, non-pharmaceutical interventions serve as primary containment strategies. Measures such as social distancing, hand hygiene, and the use of masks aim to reduce the transmission rate of the pathogen. By slowing the spread of the disease, these interventions help prevent healthcare systems from becoming overwhelmed, a concept often referred to as flattening the curve, and buy time for medical advancements.

28. (B) Re-emerging disease
A re-emerging disease refers to an infectious condition that was once a major public health concern, declined significantly due to successful control measures, but is now increasing in incidence again. This resurgence can be caused by various factors, including the development of antimicrobial resistance, changes in human behavior, or a breakdown in public health

Downloaded from www.pdf.tube

systematically analyzing and responding to public health emergencies in a structured manner.

56. (B) Incomplete and delayed reporting from peripheral health units.
A frequent challenge in the operation of public health surveillance systems is incomplete and delayed reporting from peripheral health units. These issues can stem from various factors, including lack of trained personnel, poor communication infrastructure, and heavy workloads. When data are not reported in a timely or comprehensive manner, it becomes difficult for central authorities to detect outbreaks early and initiate an effective response. Improving reporting mechanisms and providing support to local health workers are essential for strengthening surveillance.

57. (D) Agroterrorism
Agroterrorism involves the deliberate use of animal or plant pathogens to cause devastating disease and economic disruption within the agricultural sector. This form of biological threat targets the food supply and the overall economy of a region or nation. Preventing agroterrorism requires robust biosecurity measures on farms, effective surveillance for unusual animal or plant health events, and international cooperation. Protecting agricultural resources is a critical component of national security and ensuring food stability for the population during a crisis.

58. (A) Promoting a global approach to prevent, detect, and respond to threats.
The Global Health Security Agenda is a multi-nation initiative aimed at building country capacity to prevent, detect, and respond to infectious disease threats. It promotes a coordinated global approach to health security, recognizing that pathogens do not respect international borders. By strengthening national surveillance and laboratory systems, the agenda helps protect the global community from the spread of emerging and re-emerging diseases. Collaboration and information sharing among member countries are central to achieving its objectives for a safer world.

59. (C) Zoonotic diseases.
The One Health approach is particularly relevant for controlling zoonotic diseases, which are infections that spread between animals and humans. By recognizing the interconnection between animal health, human health, and the shared environment, this collaborative strategy enables more effective prevention and response. It involves cooperation among veterinarians, public health professionals, and environmental scientists to monitor and address threats at the human-animal interface. This holistic perspective is essential for managing complex health issues and preventing future pandemics of animal origin.

60. (A) Both A and R are true and R is the correct explanation of A.
Managing biomedical waste is a critical public health priority, especially during disasters when the volume of medical waste can increase significantly. The breakdown of regular waste management systems during a crisis creates a high risk of disease transmission for both healthcare workers and the community. If infectious materials and sharps are not handled and disposed of safely, they can lead to outbreaks and environmental contamination. Therefore, establishing emergency waste protocols is essential for protecting public health and ensuring safety.

61. (B) To be deployed quickly to support the control of an outbreak.
A Rapid Response Team is composed of trained professionals who can be deployed quickly to support the investigation and control of a public health emergency or disease outbreak. Their primary role is to provide technical expertise and hands-on support to local authorities in areas such as epidemiology, laboratory diagnostics, and clinical management. By initiating immediate control measures, these teams help contain the spread of disease and reduce overall morbidity and mortality. They are a vital component of emergency preparedness.

NODIA

62. (B) Anger and frustration as delays in the response become apparent.
The disillusionment phase of a community's psychological response to a disaster is typically characterized by growing anger and frustration among survivors. As the initial surge of external aid subsides and delays in long-term recovery become apparent, individuals may feel abandoned

or dissatisfied with the response. This period often involves a loss of the communal spirit seen in earlier phases. Recognizing these emotional trends is important for providing appropriate mental health support and managing community expectations during the long recovery process.

63. (C) Providing long-term infertility treatments and cosmetic gynecology.
The Minimum Initial Service Package for Sexual and Reproductive Health focuses on high-priority, life-saving activities during the onset of an emergency. Its core components include preventing and managing sexual violence, reducing HIV transmission, and ensuring access to clean delivery and emergency obstetric care. Long-term infertility treatments and cosmetic procedures are not included, as the package is designed to address the most urgent health needs and prevent excess mortality. It prioritizes services that provide the greatest public health benefit in a crisis.

64. (D) The ability of a microorganism to stop a drug from working against it.
Antimicrobial resistance refers to the ability of microorganisms, such as bacteria, viruses, and parasites, to adapt and stop antimicrobial drugs from working effectively against them. This phenomenon makes common infections harder to treat and increases the risk of disease spread, severe illness, and death. AMR is a significant global health threat that is exacerbated by the misuse and overuse of antibiotics. In disaster settings, disrupted healthcare can lead to inappropriate drug use, further accelerating the development and spread of resistant pathogens.

65. (A) 1 and 2 only
Water turbidity is a measure of clarity that can serve as an indicator of potential contamination, making it a key factor in assessing water quality. Chemical disinfection, particularly the use of chlorine, is a standard and effective method for making water safe for consumption in emergency settings. Boiling water remains a highly effective disinfection method when performed correctly. Taste and appearance alone are not reliable indicators of safety, as many harmful pathogens and chemicals do not alter the sensory properties of water.

66. (B) The rate of disease or injury in a population.
In the context of disaster epidemiology, morbidity refers to the incidence or prevalence of disease and injury within a population affected by a catastrophe. Monitoring morbidity rates is essential for understanding the health impact of the event and identifying the specific needs of survivors. This information allows health authorities to allocate resources effectively and evaluate the success of medical interventions. By tracking morbidity, epidemiologists can also detect emerging outbreaks and implement timely control measures to prevent further illness and suffering.

67. (D) An early warning signal that suggests a potential outbreak.
A trigger alert is an early warning signal generated by a surveillance system that indicates a potential public health event or disease outbreak. This alert prompts immediate investigation by health authorities to confirm the situation and initiate appropriate control measures. Triggers can be based on unusual clusters of cases, reports of high mortality, or community rumors. By facilitating rapid detection, trigger alerts are vital for containing infectious diseases before they spread widely, minimizing the overall impact on the affected population.

68. (A) Indicator-based uses structured data; event-based uses unstructured information.
Indicator-based surveillance relies on the routine and systematic collection of structured data from designated healthcare facilities on specific diseases. In contrast, event-based surveillance focuses on the rapid capture and analysis of unstructured information from informal sources like media reports and community rumors. Both systems are complementary, with event-based surveillance often providing earlier warnings of emerging threats. Together, they provide a comprehensive approach to monitoring public health risks and enabling a timely response to potential outbreaks and other emergencies.

69. (C) It refers to measures to protect agents from loss, theft, or misuse.
Biosecurity encompasses the strategic and institutional measures implemented to protect valuable biological materials and pathogens from loss, theft, diversion, or intentional

Click Here to Buy book on Amazon

misuse. While biosafety focuses on preventing accidental exposure, biosecurity aims to prevent deliberate acts of harm, such as bioterrorism or agroterrorism. Maintaining robust biosecurity standards involves physical security, personnel screening, and information protection. These measures are essential for national and global security, ensuring that dangerous biological agents are handled only by authorized individuals for legitimate purposes.

70. (B) 1, 2, and 3
Disasters often result in major health consequences, including a significant increase in the incidence of communicable diseases due to poor living conditions and overcrowding. The disruption of regular healthcare services can also lead to the exacerbation of chronic non-communicable diseases as patients lose access to essential medications and monitoring. Furthermore, increased psychological distress and mental health disorders are common among survivors. Understanding these multifaceted impacts is vital for planning a comprehensive public health response that addresses both acute and long-term health needs.

71. (A) Uncontrolled distribution of breast-milk substitutes (infant formula).
Principles of infant and young child feeding in emergencies strongly advise against the uncontrolled distribution of breast-milk substitutes. Such practices can undermine breastfeeding, which provides essential nutrition and immunity, especially in environments with poor sanitation. If infant formula is prepared with contaminated water or unhygienic equipment, it significantly increases the risk of diarrheal diseases and malnutrition. Promoting and supporting breastfeeding, while ensuring safe complementary foods are available, is the most effective way to protect infant health during a humanitarian crisis.

72. (B) The local, national, regional, and global levels.
The One Health concept is a collaborative and multisectoral approach that recognizes the interconnection between the health of people, animals, and the shared environment. It is designed to work across local, national, regional, and global levels to address complex health threats. By fostering cooperation among diverse professionals, the approach enables more effective prevention, detection, and response to challenges like zoonotic diseases and antimicrobial resistance. This integrated strategy is essential for achieving optimal health outcomes and building a more resilient global health architecture.

NODIA

73. (C) Ensure their safety and well-being during the response.
Providing health advice to emergency responders is a critical priority to ensure their safety and well-being during a disaster response. Responders often face significant physical and psychological risks, including exposure to pathogens, hazardous environments, and intense stress. Ensuring they are informed about protective measures, immunization requirements, and stress management techniques helps maintain their health and effectiveness. Protecting the health of the workforce is essential for the overall success of the relief operation and the long-term resilience of the individuals involved.

74. (D) Establishing an effective triage and trauma care system.
In the aftermath of a disaster, managing victims of road traffic injuries requires the establishment of an effective triage and trauma care system. Triage allows for the rapid assessment and prioritization of patients based on the severity of their injuries, ensuring that those with life-threatening conditions receive immediate care. A coordinated trauma care system integrates various medical services to provide timely and appropriate treatment. This approach is essential for reducing mortality and disability among injury victims when healthcare facilities and transportation infrastructure are overwhelmed.

75. (B) 2, 1, 3, 4
Effective hygiene promotion in a displaced persons camp begins with a rapid assessment of current practices and knowledge to identify the most significant risks. Based on this assessment, hygiene kits containing essential items like soap and buckets should be distributed. Establishing community-based teams ensures that promotion efforts are culturally appropriate and foster community ownership. Finally, continuous monitoring of handwashing and other practices allows for feedback and the adjustment of

services continuously, even during and after a major disaster. Sustainability involves robust infrastructure, financial stability, and a resilient workforce that can adapt to challenges. Such a system is built on proactive planning and long-term investment in health security. By ensuring the continuity of care, a sustainable health system protects the population from the direct and indirect consequences of crises and facilitates a more efficient recovery for the entire community.

90. (A) 1, 2, and 3
In emergency settings, the risk of communicable diseases is heightened by factors such as malnutrition, which increases susceptibility to infections. Overcrowding in temporary shelters can facilitate the rapid spread of respiratory diseases, while the disruption of water and sanitation systems often leads to outbreaks of faecal-oral illnesses. While some communicable diseases are vector-borne, many others are transmitted through direct contact or contaminated food and water. Understanding these various transmission routes is essential for implementing effective prevention and control strategies during a humanitarian crisis.

91. (D) Protecting health infrastructure is a key component of building resilience.
Modern disaster risk reduction frameworks emphasize the critical importance of protecting health infrastructure to build overall community resilience. Ensuring that hospitals and clinics remain functional during and after a disaster is essential for managing the immediate health effects and maintaining routine care. This requires investing in hazard-resistant construction, establishing emergency power and water supplies, and training staff in disaster response. By prioritizing the health sector within DRR strategies, governments can significantly reduce the long-term social and economic impacts of catastrophic events.

92. (B) To improve collaboration between sectors before an outbreak occurs.
A primary objective of One Health Preparedness is to improve collaboration and communication between human health, animal health, and environmental sectors before an outbreak happens. This proactive approach allows for the development of integrated surveillance systems and joint response protocols for managing threats at the human-animal interface. By working together, these sectors can detect emerging zoonotic diseases earlier and implement more effective control measures. This multisectoral cooperation is essential for preventing pandemics and ensuring a more comprehensive defense against diverse health threats.

93. (A) To describe health effects and contribute to evidence-based response.
Epidemiology plays a fundamental role in disaster management by systematically describing the health effects of an event and identifying the specific needs of the affected population. By quantifying morbidity and mortality and analyzing risk factors, epidemiologists provide the evidence needed for a more effective and targeted response. This data-driven approach ensures that limited resources are allocated to the most critical health threats. Furthermore, epidemiology helps evaluate the success of interventions and informs long-term recovery and future disaster preparedness strategies.

94. (D) Immediately publishing results in a scientific journal before control measures are implemented.
An outbreak investigation follows a systematic set of steps, including defining and identifying cases, performing descriptive epidemiology, and developing and evaluating hypotheses. The ultimate goal is to implement effective control and prevention measures to protect public health. While documenting findings is important, the immediate priority is always the control of the disease rather than academic publication. Communication with the public and stakeholders is essential during the investigation, but formal publishing typically occurs after the emergency has been stabilized and control measures are in place.

95. (A) 1, 2, and 3
A comprehensive Health Information System includes the generation of data from various sources, such as health facilities and community surveys. This data must then be analyzed and interpreted to provide meaningful information on health status and service delivery. The final critical component is the dissemination of this information to decision-makers to inform policy and resource allocation. While human resources

Downloaded from www.pdf.tube

requires promoting respiratory hygiene, ensuring adequate ventilation, and implementing vaccination programs where possible. Monitoring for unusual respiratory disease patterns is essential for the early detection and control of influenza and other respiratory infections during a crisis.

83. (C) A sudden clustering of gastrointestinal illness cases in time and place.
A sudden clustering of gastrointestinal illness cases in a specific time and place is the most critical early warning signal for a potential water-borne outbreak. This pattern suggests a common source of exposure, often contaminated water, and warrants an immediate epidemiological investigation. Timely detection allows health authorities to identify the contamination source and implement control measures, such as providing alternative water supplies or initiating emergency chlorination. Proactive surveillance for such clusters is vital for preventing the large-scale spread of diseases like cholera.

84. (A) The proportion of true cases of a disease that are detected.
Sensitivity is a key attribute of a public health surveillance system, referring to the proportion of true cases of a disease that the system successfully detects. A highly sensitive system is more likely to identify an outbreak in its early stages, enabling a rapid and effective response. However, high sensitivity can sometimes lead to an increase in false-positive reports. Evaluating sensitivity involves comparing the system's findings with other data sources to ensure that it is effectively capturing the health events it is designed to monitor.

85. (A) Both A and R are true and R is the correct explanation of A.
Community involvement is essential for the success of hygiene promotion programs in emergency settings. When people are actively involved in the planning and implementation of these initiatives, they are more likely to understand the benefits and adopt safe hygiene practices over the long term. Participation fosters a sense of ownership and ensures that interventions are culturally appropriate and responsive to local needs. By empowering the community, health authorities can create more sustainable behavioral changes that significantly reduce the risk of disease transmission.

86. (B) A zoonotic disease
A zoonotic disease is an infectious condition that is naturally transmitted from vertebrate animals to humans. These diseases can be spread through direct contact, contaminated food and water, or via insect vectors. Common examples include rabies, brucellosis, and certain types of influenza. Zoonotic diseases pose a significant public health threat and require a multisectoral approach for effective control. Understanding the human-animal interface is essential for preventing the spillover of pathogens and managing outbreaks that originate in wildlife or domestic animal populations.

NODIA

87. (D) A formal, structured intervention shortly after a traumatic event.
Psychological debriefing is a formal and structured intervention typically provided shortly after a group has been exposed to a traumatic event. It aims to provide individuals with an opportunity to discuss their experiences and process their emotions in a supportive environment. While intended to prevent the development of long-term psychological issues, its effectiveness remains a subject of debate in the mental health field. Some practitioners favor more individual-centered and less intrusive approaches like Psychological First Aid during the immediate aftermath of a disaster.

88. (A) Tuberculosis, particularly multi-drug resistant strains, in areas where it was previously declining.
Tuberculosis serves as a primary example of a re-emerging disease, particularly with the rise of multi-drug resistant strains. While incidence had declined significantly in many regions due to effective control programs, factors such as a breakdown in public health infrastructure and the misuse of medications have led to its resurgence. These resistant strains are much harder and more expensive to treat, posing a major threat to global health security. Addressing the drivers of drug resistance is essential for maintaining progress in tuberculosis control.

89. (C) Sustainable
A sustainable health system is one that possesses the capacity to provide essential

strategies. This logical sequence maximizes the impact of hygiene interventions on public health.

76. (B) Compare the exposure history of cases and controls to identify risk factors.
In disaster epidemiology, a case-control study is a valuable tool for identifying risk factors associated with a particular health outcome. This study design involves comparing individuals who have the disease or injury with a group of similar individuals who do not. By examining differences in their exposure history, researchers can determine which factors likely contributed to the health event. This analytical approach is particularly useful for investigating outbreaks or injuries when time and resources are limited during an emergency.

77. (C) Prepare for fieldwork and establish the existence of an outbreak.
The initial step in an outbreak investigation involves preparing for fieldwork and establishing whether an actual outbreak is occurring. This requires reviewing existing surveillance data and community reports to confirm that the number of cases exceeds normal expectations. Once the existence of an outbreak is verified, investigators can organize the necessary resources and personnel to begin a more detailed inquiry. Early confirmation is essential for mobilizing a rapid response and implementing preliminary control measures to protect the health of the affected population.

78. (B) Reduce excess disease and death.
The primary goal of any disease control program in an emergency setting is to reduce excess morbidity and mortality within the affected population. In the face of disrupted services and increased risks, these programs focus on high-impact interventions such as immunization, vector control, and the provision of clean water and sanitation. By targeting the most significant health threats, authorities aim to stabilize the health situation and prevent widespread outbreaks. The ultimate objective is to protect lives and facilitate the recovery process.

79. (B) The provision of direct patient care, including diagnosis, treatment, and management.
Clinical services represent the core function of a health system, involving the provision of direct patient care by healthcare professionals. This encompasses the diagnosis, treatment, and management of various health conditions, as well as preventive and rehabilitative care. In both routine and emergency situations, effective clinical services are essential for improving individual health outcomes and protecting the community. Ensuring the continuity and quality of these services during a disaster is a major challenge that requires robust infrastructure, skilled personnel, and essential medical supplies.

80. (C) P-3, Q-1, R-4, S-2
The International Health Regulations provide a legally binding framework for countries to cooperate in preventing and responding to acute public health risks. The Global Health Security Agenda is a multi-nation initiative focused on building national capacity for disease prevention and detection. A Public Health Emergency of International Concern is an extraordinary event that poses a risk across borders. The Early Warning, Alert and Response System supports rapid detection and response in emergencies. These components collectively strengthen the global defense against infectious disease threats.

81. (C) The volume of solid waste often decreases significantly after a disaster.
Contrary to the idea that solid waste decreases after a disaster, disasters often lead to a significant increase in the volume of waste generated. This includes debris from damaged buildings, spoiled food, and packaging from relief supplies. If not managed properly, this waste can attract disease-carrying vectors like rats and flies and block drainage channels, increasing the risk of flooding and water-borne diseases. Effective solid waste management, through methods like burial or controlled burning, is essential for maintaining hygiene and protecting public health.

82. (B) Crowded living conditions in shelters can facilitate rapid transmission.
Influenza epidemiology is a major concern in disaster settings because the crowded living conditions often found in emergency shelters facilitate the rapid transmission of respiratory viruses. Close contact between individuals and poor ventilation can lead to widespread outbreaks among vulnerable populations. Managing influenza in these environments

Click Here to Buy book on Amazon

and economic policy are related to the health system, the core functions of the HIS focus specifically on the management of health-related data.

96. (B) A sample of the Ebola virus
A sample of the Ebola virus is a clear example of a biological hazard, as it is a highly pathogenic microorganism capable of causing severe disease in humans. Biological hazards include bacteria, viruses, parasites, and biological toxins that pose a threat to individual and public health. Managing these hazards requires specialized containment facilities, rigorous safety protocols, and robust surveillance systems. In the context of disaster management, being prepared to detect and respond to biological threats is essential for protecting the population and preventing large-scale outbreaks.

97. (D) A period of intense community bonding and altruism.
The honeymoon phase of a community's psychological response to a disaster is characterized by a period of intense community bonding and a strong spirit of altruism. During this time, survivors and responders often work together closely, sharing a sense of shared purpose and optimism. While this phase can provide significant emotional support, it is typically transient. Recognizing this pattern helps disaster managers understand the emotional dynamics of the affected community and prepare for the more challenging disillusionment phase that often follows as the initial surge of support subsides.

98. (B) Ensuring access to clean delivery, obstetric care, and support.
Maternal health and safe motherhood initiatives in disaster settings are focused on ensuring that pregnant women have access to clean delivery kits, emergency obstetric care, and psychological support. These interventions are essential for reducing maternal and newborn morbidity and mortality, which often increase during crises due to disrupted services and poor living conditions. By prioritizing reproductive health, aid organizations can protect one of the most vulnerable groups in an emergency and ensure that life-saving care is available even under extremely difficult circumstances.

99. (C) Decontamination to remove the hazardous substance.
In the event of a chemical disaster, the most critical immediate action for victims is decontamination to remove the hazardous substance from their skin and clothing. This process is essential for preventing further absorption of the toxin and reducing the risk of cross-contamination for healthcare workers and other responders. Rapid decontamination can significantly improve individual health outcomes and is a fundamental component of the medical response to chemical incidents. Establishing clear decontamination protocols and providing specialized facilities are vital parts of emergency preparedness for industrial or chemical threats.

100. (B) 2, 1, 3
The epidemiological triad is a model for understanding disease transmission consisting of the agent, the host, and the environment. In this framework, the agent represents the pathogen, such as a virus or bacterium, that causes the disease. The host is the affected or susceptible person who harbors the agent. The environment includes the external conditions, such as contaminated water or crowded shelters, that facilitate the interaction between the agent and the host. Understanding this sequence is essential for identifying intervention points to control the spread of disease.

101. (D) Providing highly specialized, complex diagnostic and treatment services.
Tertiary healthcare services are characterized by the provision of highly specialized and complex diagnostic and treatment services. These facilities often serve as regional or national referral centers for patients requiring advanced medical care that cannot be provided at primary or secondary levels. Tertiary care institutions typically house specialized equipment and expert personnel for managing severe or rare health conditions. Maintaining the functionality of these centers during a disaster is crucial for ensuring that patients with the most complex medical needs continue to receive appropriate care.

102. (A) Is present in a community at all times, usually at a low, predictable level.
An endemic disease is one that is constantly present within a specific geographic area or

Downloaded from www.pdf.tube

health trends and ensuring that resources are used effectively to improve population health.

128. (B) An increase in the risk of outbreaks, such as measles.
Large and uncontrolled population movements during a disaster pose a significant public health threat, primarily through an increased risk of disease outbreaks such as measles. Crowded living conditions in temporary shelters, poor sanitation, and the disruption of routine immunization programs create ideal conditions for the rapid spread of highly contagious pathogens. Addressing these risks requires the rapid implementation of vaccination campaigns, strengthening of disease surveillance, and provision of essential hygiene and sanitation services. Protecting displaced populations from infectious diseases is a top priority for humanitarian health response and recovery.

129. (C) To kill or inactivate pathogenic microorganisms.
The primary purpose of chlorination in an emergency is to kill or inactivate pathogenic microorganisms, such as bacteria and viruses, that may be present in the water supply. Chlorine is a highly effective and relatively inexpensive disinfectant that provides a residual effect, protecting water from re-contamination during storage and distribution. Ensuring that water is microbiologically safe is a fundamental component of preventing water-borne disease outbreaks, such as cholera. Proper chlorination, combined with monitoring of residual levels, is essential for protecting the health of vulnerable populations during a humanitarian crisis.

130. (A) P-4, Q-2, R-1, S-3
Biomedical waste includes items like used syringes and contaminated dressings from healthcare facilities. Solid municipal waste encompasses general garbage such as food scraps and packaging from shelters. Excreta refers specifically to human feces and urine, requiring safe disposal to prevent faecal-oral diseases. CBRNe waste includes materials contaminated by chemical, biological, or radiological agents. Categorizing waste in this manner is essential for ensuring appropriate handling, treatment, and disposal methods, which protects both public health and the environment during various types of emergencies and routine health operations.

NODIA

131. (A) Health program managers and policy makers for decision-making.
The Health Management Information System is primarily designed for use by health program managers and policy makers to inform evidence-based decision-making. By providing timely and accurate data on service delivery, health status, and resource utilization, the system allows managers to monitor performance and identify areas for improvement. This information is essential for effective planning, resource allocation, and policy development. A well-functioning HMIS enhances the overall efficiency and effectiveness of the health system, ensuring that services are responsive to the needs of the population, especially during emergencies.

132. (B) To confirm the diagnosis in suspected cases.
Laboratories play a critical role in an outbreak investigation by providing definitive confirmation of the diagnosis in suspected cases. While epidemiological data can suggest the cause of an outbreak, laboratory testing identifies the specific pathogen or toxin involved. This information is essential for implementing targeted control measures, determining the appropriate clinical management of patients, and monitoring the spread of the disease. Strengthening laboratory capacity is a vital component of emergency preparedness, ensuring that health authorities have the diagnostic tools needed to respond rapidly and effectively to potential public health threats.

133. (C) Selected sites agree to report cases of one or more conditions.
Sentinel surveillance is a system where a limited number of selected healthcare sites or providers agree to report cases of specific diseases or conditions. This method allows for the collection of high-quality, detailed data that can be used to monitor trends and identify changes in disease patterns. While not providing a complete count of all cases in a population, sentinel surveillance is more cost-effective than comprehensive systems and can provide valuable insights for public health planning. It is often used to monitor diseases like influenza or other emerging health threats.

community vigilance. Protecting agricultural assets is essential for maintaining the stability of the food supply chain and the livelihoods of rural populations.

109. (C) To provide a legal framework for preventing disease spread.
The primary function of the International Health Regulations is to provide a legally binding framework for countries to cooperate in preventing, detecting, and responding to the international spread of disease. These regulations require member states to build and maintain core capacities for surveillance and response and to notify the World Health Organization of potential public health emergencies of international concern. By facilitating international collaboration and information sharing, the IHR play a critical role in global health security and the management of cross-border health threats.

110. (A) Both A and R are true and R is the correct explanation of A.
Zoonotic diseases represent a growing threat to global health as human activities increase the contact between people and wildlife. Factors such as deforestation, the expansion of agricultural land, and global travel facilitate the spillover of pathogens from animals to humans. These emerging infections can lead to widespread outbreaks and pandemics, as seen with several recent global health crises. Addressing this threat requires a One Health approach that integrates human, animal, and environmental health surveillance to detect and mitigate risks at the earliest possible stage.

111. (D) Experiencing stress, fear, and anxiety are expected reactions.
In the aftermath of a disaster, experiencing stress, fear, and anxiety is considered a normal and expected human response to an extraordinary and terrifying event. Most individuals will have emotional reactions that, while distressing, are transient and do not necessarily indicate a long-term mental health disorder. Recognizing these reactions as normal helps reduce stigma and encourages survivors to seek support when needed. Providing a supportive environment and basic psychological first aid can help individuals process these emotions and foster their natural resilience and coping mechanisms during recovery.

112. (B) Human-animal-environment interface.
One Health Preparedness focuses on strengthening systems to prevent, detect, and respond to health threats at the critical interface between humans, animals, and their shared environment. By integrating surveillance and response efforts across these three sectors, health authorities can identify emerging zoonotic diseases and environmental risks more effectively. This collaborative approach recognizes that the health of all three components is interconnected. Strengthening this interface is essential for building a comprehensive and resilient defense against complex health challenges that transcend traditional disciplinary boundaries.

113. (D) Characteristics influencing capacity to anticipate and recover.
Health-related vulnerability in the context of a disaster refers to the various characteristics and conditions that influence an individual's or community's capacity to anticipate, cope with, and recover from a hazardous event. These factors can include age, pre-existing health conditions, socioeconomic status, and access to healthcare services. Understanding these vulnerabilities is essential for identifying high-risk groups and prioritizing aid during an emergency. By addressing the underlying drivers of vulnerability, disaster managers can implement more effective risk reduction strategies and build stronger, more resilient communities.

114. (D) Overwhelmed facilities and damaged transportation infrastructure.
Caring for victims of road traffic injuries immediately after a large-scale disaster is often complicated by overwhelmed healthcare facilities and damaged transportation infrastructure. Hospitals may be dealing with a sudden surge of patients, while destroyed roads and bridges make it difficult to transport the injured to receiving centers. These challenges necessitate effective triage and the use of mobile medical units to provide care on-site. Ensuring that emergency medical services are integrated into overall disaster response planning is vital for reducing mortality and disability among injury victims during a crisis.

Click Here to Buy book on Amazon

population group, typically at a low and relatively predictable level. While it does not cause sudden, large-scale outbreaks like an epidemic, its persistent presence poses a long-term challenge to public health. Managing endemic diseases requires ongoing surveillance, prevention strategies, and consistent access to healthcare. Understanding the baseline levels of these diseases is essential for detecting any unusual increases that might signal a potential outbreak or changing environmental conditions.

103. (D) Water-enhanced diseases
Diseases related to water in emergencies are typically categorized into four main groups: water-borne, water-washed, water-based, and water-related insect vectors. Water-borne diseases are caused by ingesting contaminated water, while water-washed diseases result from poor hygiene due to water scarcity. Water-based diseases involve pathogens that spend part of their life cycle in aquatic organisms. Water-related insect vectors, such as mosquitoes, breed in or near water. The term 'water-enhanced' is not a standard category in this public health framework for classifying water-associated disease transmission.

104. (D) Data for the management and planning of health services.
The Health Management Information System is a specific component of the broader Health Information System that focuses on providing data for the effective management and planning of health services. It collects information on service delivery, resource utilization, and health outcomes at various levels. This data is essential for monitoring program performance, identifying gaps in care, and making informed decisions about resource allocation. A well-functioning HMIS is a vital tool for improving the efficiency and effectiveness of the health system, both in routine and emergency situations.

105. (B) P-4, Q-1, R-2, S-3
Psychological First Aid is a practical, non-intrusive approach providing immediate comfort and support to those in distress. Cognitive Behavioral Therapy is a structured method used to change maladaptive thinking patterns and behaviors. Community-based interventions utilize local social networks to promote collective resilience and well-being after a disaster. Psychological debriefing involves a single-session intervention aimed at processing a traumatic event shortly after its occurrence. These diverse strategies allow mental health professionals to provide appropriate levels of support based on individual and community needs.

106. (B) Analyze spatial distribution in relation to the ventilation.
When investigating a suspected airborne outbreak in a crowded setting like an emergency shelter, a key method involves analyzing the spatial distribution of cases in relation to the ventilation system. Airborne pathogens spread through small droplets that can remain suspended in the air, making airflow patterns a critical factor in transmission. By identifying clusters of cases in poorly ventilated areas, investigators can confirm the airborne nature of the outbreak and implement control measures, such as improving ventilation or reorganizing the living space to reduce overcrowding.

NODIA

107. (D) The establishment of a decentralized, state-based surveillance system.
A key feature of the Integrated Disease Surveillance Project in India is the establishment of a decentralized, state-based surveillance system. This approach aims to strengthen disease monitoring at various levels, from the district to the national level, by facilitating rapid data collection and analysis. By involving both public and private health sectors, the project provides a more comprehensive overview of disease trends. This decentralized structure enables more timely detection and response to potential outbreaks, enhancing overall public health security across the diverse regions of the country.

108. (A) The deliberate, non-political theft and sale of livestock.
Agrocrime refers to illegal acts that target the agricultural sector, such as the deliberate theft and sale of livestock for financial gain. Unlike agroterrorism, which has political or ideological motivations, agrocrime is primarily driven by criminal intent. Nevertheless, it can have significant economic impacts and pose risks to animal health and food safety. Preventing agrocrime requires effective law enforcement, robust animal identification systems, and

food establishments. By understanding how the contamination occurred, investigators can also develop recommendations to improve food safety practices and prevent future outbreaks. This proactive approach is essential for protecting the health of the community and maintaining the safety of the food supply.

122. (B) Staff visiting facilities, labs, and communities to find cases.
Active surveillance involves public health staff proactively visiting healthcare facilities, laboratories, and communities to identify cases of a specific disease. This method is more labor-intensive and expensive than passive surveillance but provides more complete and timely data, especially during an outbreak. By actively seeking out information, health authorities can detect emerging health threats earlier and initiate a more rapid response. Active surveillance is a critical tool for monitoring high-priority diseases and evaluating the effectiveness of control programs in both routine and emergency situations.

123. (D) Guide the implementation of preparedness and response measures.
The stages of a pandemic are used to guide the implementation of appropriate preparedness and response measures at various phases of a global health crisis. These stages help countries organize their public health actions, from initial monitoring and risk assessment to intensive response and recovery planning. By providing a structured framework, the stages ensure a coordinated and timely international response to emerging threats. This approach allows health authorities to allocate resources effectively and implement strategies that are appropriate for the level of risk at each stage of the pandemic.

124. (D) Human demographic change including travel and urbanization.
Human demographic changes, such as increased international travel and rapid urbanization, are significant factors contributing to the emergence and spread of new diseases. Travel allows pathogens to move quickly across borders, while crowded urban environments can facilitate the rapid transmission of infections. Additionally, the expansion of human settlements into previously undisturbed areas increases contact with wildlife, facilitating the spillover of zoonotic pathogens. Understanding these social and demographic drivers is essential for developing effective global health security strategies and enhancing surveillance for emerging infectious threats in a highly connected world.

125. (B) 2, 4, 1, 3
A community's psychological response to a disaster typically follows a sequence beginning with the heroic and honeymoon phases, characterized by altruism and bonding. This is followed by a period of disillusionment as reality sets in and resources may seem insufficient. Finally, the reconstruction phase involves long-term recovery and adaptation to a new normal. Recognizing these stages helps mental health professionals provide appropriate support at each stage of the post-disaster transition. Understanding these emotional trends is important for providing appropriate mental health support and managing community expectations during the long recovery process.

126. (A) An organism, often an insect, that transmits a pathogen.
In the context of disease transmission, a vector is an organism, most commonly an insect like a mosquito or tick, that carries and transmits a pathogen from one host to another. Vectors play a critical role in the life cycle of many infectious diseases, such as malaria, dengue fever, and Lyme disease. Controlling vector-borne diseases often focuses on reducing vector populations or preventing contact between vectors and humans. Understanding the biology and habitat of vectors is essential for developing effective public health strategies to prevent and manage outbreaks of these diseases.

127. (D) National political party manifestos
A Health Information System is composed of several core components, including resources like financing and personnel, indicators for measuring health status and service coverage, and diverse data sources such as surveys and service records. These elements work together to provide the evidence needed for effective health system management and policy-making. Political party manifestos are not a component of this technical system, which focuses on the systematic collection and analysis of health-related data. A well-functioning HIS is essential for monitoring

Downloaded from www.pdf.tube

115. (B) 2, 3, and 4
While most disaster survivors will not develop PTSD, many will experience significant stress and anxiety. Responders are also at risk for mental health challenges due to the intense nature of their work. Protective factors, such as strong social support and access to resources, can mitigate negative psychological impacts. Children and other vulnerable groups often have specific needs that require specialized attention. Providing a range of psychosocial interventions, from basic support to specialized care, is essential for promoting long-term mental well-being and recovery for all affected groups.

116. (B) A multi-year plan for building a new specialty hospital.
Setting up a disease control program in an emergency requires several immediate components, including a clear case definition, diagnostic criteria, and a system for surveillance and case detection. It also necessitates a defined treatment protocol and a reliable supply of essential medicines to manage cases effectively. While building new hospitals may be a long-term goal for health system development, it is not a primary step in responding to an acute outbreak during a crisis. The focus is on rapid, high-impact interventions that can be implemented quickly with existing resources.

117. (D) Measures that enable it to withstand hazards and function.
An essential feature of resilient health infrastructure is the implementation of measures that enable it to withstand various hazards and continue to function during and after a disaster. This includes hazard-resistant construction, redundant power and water systems, and robust communication networks. A resilient facility ensures that life-saving services remain available when they are needed most. By investing in the physical and operational resilience of hospitals and clinics, communities can significantly reduce the vulnerability of their health system and improve overall disaster response and recovery.

118. (A) A disease caused by a pathogen ingested through contaminated water.
A water-borne disease is caused by a pathogenic microorganism that is ingested through contaminated water. Common examples include cholera, typhoid, and various diarrheal illnesses. These diseases spread rapidly in environments with poor sanitation and limited access to clean water, which are frequent challenges in emergency settings. Controlling water-borne outbreaks requires immediate interventions to provide safe drinking water and promote effective hygiene and sanitation practices. Ensuring water quality is a fundamental component of protecting public health and reducing morbidity in vulnerable populations.

NODIA

119. (C) Asymptomatic or mild cases obscure true infection rates.
A primary challenge in conducting epidemiological studies on influenza during a pandemic is that many cases are asymptomatic or mild, which can obscure the true infection rate in a population. Individuals who do not feel significantly ill are unlikely to seek medical care or be tested, leading to an underestimation of the virus's spread. This issue makes it difficult for health authorities to accurately assess the magnitude of the pandemic and the effectiveness of control measures. Comprehensive surveillance and serological studies are needed to capture a more realistic picture.

120. (A) 1, 2, and 3
Planning water and sanitation for institutions during an emergency requires calculating the number of users to determine demand and assessing the functionality of existing facilities. Ensuring an adequate ratio of toilets to users is essential for maintaining hygiene and preventing the spread of diseases. Handwashing stations are critical and should never be ignored to save costs, as they are a fundamental component of infection control. Proper waste disposal must also be ensured to prevent the contamination of water sources and the surrounding environment, protecting all individuals within the institution.

121. (C) Identify contamination sources to prevent further cases.
The main purpose of investigating a food-borne outbreak is to identify the source of contamination and the specific food items involved to prevent further cases of illness. This process allows health authorities to implement targeted control measures, such as removing contaminated products from the market or closing affected

134. (D) Anthrax spores deliberately released into the air
Anthrax spores deliberately released into the air represent a classic example of a biological weapon. Such agents are used with the intent to cause widespread illness or death in humans, animals, or plants. The use of biological weapons is a major international security concern and is prohibited by international law. Preparedness for biological threats involves strengthening surveillance for unusual disease patterns, enhancing laboratory diagnostic capacity, and developing response protocols that include the use of personal protective equipment and the distribution of appropriate treatments or vaccines to the affected population.

135. (A) Both A and R are true and R is the correct explanation of A.
The Minimum Initial Service Package for Sexual and Reproductive Health is a critical intervention that should be implemented at the onset of every emergency. It consists of a set of priority activities designed to save lives and prevent illness, particularly among women and girls who are often disproportionately affected by crises. By addressing the most urgent reproductive health needs, such as managing the consequences of sexual violence and ensuring safe deliveries, the MISP helps reduce excess morbidity and mortality. This package ensures that essential, life-saving care is available during the initial response.

136. (D) The successful, widespread, and sustained use of an effective vaccine.
The successful and sustained use of an effective vaccine is a primary method for controlling and even eradicating diseases, rather than a cause of their re-emergence. Re-emergence is typically driven by factors such as a breakdown in public health measures, increased travel, or the development of antimicrobial resistance. These factors allow previously controlled diseases to resurge and pose a new threat to population health. Maintaining high vaccination coverage and strong surveillance systems is essential for preventing the return of these infectious diseases and ensuring long-term global health security for all populations.

137. (C) Stressed responders are more prone to errors and health effects.
Managing stress and ensuring the well-being of disaster responders is essential because those under extreme stress are more prone to making errors and experiencing negative health effects. Responders often work in high-pressure and hazardous environments, which can lead to physical and psychological exhaustion. Protecting their health not only ensures their individual well-being but also maintains the effectiveness and safety of the overall response effort. Providing support, such as regular breaks, clear communication, and access to psychological resources, is a critical component of responsible emergency management and workforce sustainability.

138. (B) Integrating veterinary, environmental, and human health expertise in planning.
The One Health approach for disaster management involves integrating expertise from veterinary, environmental, and human health sectors into all phases of planning and response. This collaborative strategy recognizes that many disaster-related health threats, such as zoonotic outbreaks or environmental contamination, require a multisectoral solution. By working together, these sectors can share data, identify risks more effectively, and implement more comprehensive control measures. This integrated perspective is essential for building more resilient systems and ensuring a more effective defense against the diverse and complex health challenges posed by disasters.

139. (D) Providing care for disability, psychosocial support, and restoring services.
Health-related rehabilitation following a disaster encompasses a wide range of activities, including providing care for individuals with new or pre-existing disabilities, offering psychosocial support to address the trauma of the event, and restoring essential health services. The goal of rehabilitation is to help survivors regain their function and improve their overall quality of life. This process requires a multidisciplinary approach and long-term commitment. By focusing on both the physical and psychological needs of the population, rehabilitation efforts

Click Here to Buy book on Amazon

facilitate a more holistic and sustainable recovery for individuals and their communities.

140. (B) 2 and 4 only
Post-Traumatic Stress Disorder is a serious condition characterized by symptoms such as flashbacks, nightmares, and severe anxiety following exposure to a traumatic event. It is not a transient reaction and can significantly interfere with an individual's daily functioning. Early recognition of these symptoms and access to evidence-based mental health support, such as specialized therapy, are essential for improving long-term outcomes for disaster survivors. Providing a supportive environment and reducing stigma associated with mental health are also critical components of facilitating recovery and resilience in affected populations after a crisis.

141. (C) The extent to which results were achieved at a reasonable cost.
The evaluation of efficiency in a disaster health program assesses the extent to which the program's objectives were achieved relative to the resources utilized. This involves examining whether results were obtained at a reasonable cost and if resources were used in the most effective manner possible. Efficiency is a critical consideration in humanitarian response, where resources are often limited and the needs are great. By identifying ways to improve efficiency, health managers can ensure that aid reaches more people and has a greater overall impact on population health and well-being.

142. (A) Diabetes
Diabetes is a major chronic disease that can be significantly exacerbated during an emergency due to the disruption of routine care and access to essential medications like insulin. Survivors with diabetes may face severe health complications if they are unable to monitor their blood sugar levels or maintain their regular treatment regimen. Managing chronic conditions during a disaster requires ensuring the continuity of essential supplies and providing specialized care for those at risk. Addressing the needs of individuals with non-communicable diseases is a critical component of a comprehensive and equitable health response.

143. (D) Preventing contamination of water sources and the immediate environment.
In planning for excreta disposal in an emergency camp, the most important initial consideration is preventing the contamination of water sources and the immediate living environment. Improper sanitation can lead to the rapid spread of faecal-oral diseases, which are a major cause of morbidity and mortality in humanitarian crises. Ensuring that toilets are appropriately located and designed to contain waste effectively is essential for protecting public health. This fundamental component of sanitation planning provides a critical barrier against pathogens and is a top priority for maintaining hygiene in crowded settings.

144. (A) A susceptible host
Within the epidemiological triad, an individual with a weakened immune system, such as one suffering from malnutrition, is considered a susceptible host. This means they are at higher risk of contracting and becoming severely ill from an infectious disease. The host's health status, including nutrition and immunization history, is a critical factor in determining the outcome of an interaction with a pathogen. Protecting vulnerable hosts through targeted interventions, such as nutritional support and vaccination, is an essential component of public health strategies to reduce disease impact in emergency settings.

145. (C) 1, 2, and 3
Key steps in an outbreak investigation include establishing the existence of the outbreak, verifying the diagnosis, and preparing a detailed line listing of cases. These initial actions are essential for understanding the scope of the event and ensuring that subsequent investigations are based on accurate information. Ignoring community reports or waiting until an outbreak ends would be counterproductive and endanger public health. By following a systematic approach, health authorities can more effectively identify the source of the outbreak and implement control measures to protect the population and prevent further illness.

146. (B) Balancing sensitivity and timeliness with simplicity and cost-effectiveness.
A major challenge in evaluating a surveillance system is balancing the need for high sensitivity

NODIA

and timeliness with the practical requirements of simplicity and cost-effectiveness. A system that is extremely thorough may be too slow or expensive to be sustainable, while a very simple system might miss critical health events. Evaluators must assess these competing attributes to ensure that the system provides the most useful information for public health action within the available resources. This ongoing assessment is essential for maintaining a surveillance system that is both effective and efficient over time.

147. (A) The Director-General of the World Health Organization (WHO).
A Public Health Emergency of International Concern is formally declared by the Director-General of the World Health Organization. This declaration is based on the recommendations of an emergency committee of experts and signifies an extraordinary event that constitutes a public health risk to other states. Such a designation necessitates a coordinated international response under the framework of the International Health Regulations. This mechanism allows the global community to work together more effectively to contain major health threats and prevent their international spread, protecting populations worldwide from significant disease risks.

148. (B) The use of toxins or infectious agents as weapons of war.
Biowarfare refers to the deliberate use of infectious agents or toxins of biological origin as weapons in a conflict. These agents, which can include bacteria, viruses, or biological toxins, are used to cause illness or death in humans, animals, or plants. The use of biological weapons is widely condemned and prohibited under international law. Preparedness for biowarfare requires robust surveillance for unusual disease patterns and the development of specialized response capabilities. Protecting populations from such threats is a critical component of national and global security and humanitarian health efforts.

149. (C) Persistent and disabling symptoms that interfere with functioning.
An abnormal human response to a disaster is characterized by persistent and disabling psychological symptoms that significantly interfere with an individual's ability to function in their daily life. While short-term distress is expected, long-lasting emotional and behavioral problems may indicate the development of a more serious mental health disorder, such as post-traumatic stress disorder. Recognizing these abnormal patterns is essential for identifying individuals who need more specialized psychiatric care. Providing timely and appropriate interventions can help mitigate the long-term impact of the disaster and support the individual's journey toward recovery and adaptation.

NODIA

150. (B) 3, 4, 2, 1
In a tiered health system, a patient with a complex condition typically follows a structured referral pathway. This begins with an initial consultation at a primary health centre, the first point of contact. If more specialized care is needed, they are referred to a secondary care district hospital for further tests and initial management. For highly complex procedures like surgery, the patient is then referred to a tertiary care super-specialty hospital. This system ensures that patients receive the most appropriate level of care based on their medical needs and resource availability.

151. (B) Foster integrated readiness for managing health emergencies.
One Health Preparedness aims to foster integrated readiness across various sectors, including human, animal, and environmental health, for the effective management of health emergencies. By developing joint surveillance systems and response protocols, this approach enables more efficient detection and control of threats at the human-animal-environment interface. This collaborative strategy recognizes that complex health challenges require a multisectoral solution. Improving integrated readiness ensures that all sectors are prepared to work together effectively, reducing the overall impact of outbreaks and other emergencies on population health and building a more resilient global health architecture.

152. (D) Providing limbs and physiotherapy for amputees.
Health-related rehabilitation after a major disaster, such as an earthquake, focuses on restoring function and improving the quality of life for survivors with injuries. This includes

is essential for building a resilient healthcare system that can effectively manage various internal and external challenges and maintain high standards of care.

177. (D) Maternal health and safe motherhood.
Providing clean delivery kits and ensuring access to emergency obstetric care are core components of maternal health and safe motherhood programs in disaster settings. These interventions are critical for reducing maternal and newborn morbidity and mortality, which often rise during crises due to disrupted services and poor environmental conditions. By prioritizing these life-saving reproductive health services, aid organizations can protect one of the most vulnerable groups in an emergency and ensure that essential care for mothers and their infants is available even under extremely difficult and stressful circumstances.

178. (A) Achieve outcomes by recognizing the interconnection between sectors.
The primary goal of a One Health approach for disaster management is to achieve optimal health outcomes by recognizing and addressing the interconnectedness of human, animal, and environmental health. This collaborative strategy integrates expertise across multiple sectors to improve the prevention, detection, and response to health threats like zoonotic diseases and environmental contamination. By fostering multisectoral cooperation, One Health enables a more comprehensive and effective defense against complex health challenges. This holistic perspective is essential for building resilient systems and ensuring that disaster management strategies protect the health of all species and the environment.

179. (D) Cease all operations and wait for external assistance.
A resilient health system is characterized by its capacity to absorb the shock of a disaster, adapt its functions and structures to meet changing needs, and ultimately transform to become stronger. Such a system ensures the continuity of essential services and protects the population even under extreme stress. Resilience involves proactive planning, robust infrastructure, and the ability to mobilize resources effectively. Ceasing operations and relying solely on external aid is the opposite of resilience. Building health system resilience is a critical goal for disaster risk management and sustainable health development.

180. (B) P-3, Q-4, R-2, S-1
The epidemiological triad provides a framework for analyzing disease causation through the interaction of agent, host, and environment. A Post Disaster Needs Assessment is a systematic evaluation used to quantify damages and losses to inform recovery planning. A Disaster Registry is a database used for the long-term health monitoring of an affected cohort. An epidemiological survey involves collecting data from a sample of the population to measure health status or disease prevalence. These concepts and tools are essential for understanding the health impacts of disasters and planning effective recovery interventions.

181. (D) A hospital reporting an unusual cluster of similar patients.
A trigger alert for an outbreak investigation can be generated by various events, such as a hospital reporting an unusual cluster of patients with similar symptoms. These alerts serve as early warning signals that prompt immediate investigation by health authorities to confirm a potential public health event. Other triggers can include reports of high mortality in animals or community rumors of unusual illness. By facilitating rapid detection, trigger alerts allow for the implementation of control measures at the earliest possible stage, minimizing the overall impact of the outbreak on public health.

182. (B) Many reported cases turn out not to be true cases upon investigation.
A surveillance system with a low positive predictive value is one where many of the reported cases turn out not to be true cases of the disease after a detailed investigation. This can occur when case definitions are very broad or if there is a high level of background noise from similar conditions. While a low PPV can indicate a highly sensitive system, it can also lead to a waste of resources as many reports require investigation without identifying an actual threat. Evaluators must balance PPV with other system attributes to ensure overall effectiveness.

183. (D) Corrosive acid

Downloaded from www.pdf.tube

associated with all types of hazards. It covers all phases of the disaster cycle, including prevention, preparedness, response, and recovery. By fostering multisectoral collaboration and emphasizing community resilience, the framework aims to build more robust and responsive health systems. This holistic perspective ensures that health is integrated into broader disaster risk management strategies, ultimately reducing the overall impact of emergencies on population health and facilitating a more sustainable recovery for affected communities.

159. (C) A novel coronavirus appearing for the first time.
An emerging infectious disease is one that has appeared in a population for the first time, such as a novel coronavirus. These diseases pose significant challenges because the population has no prior immunity, and medical treatments or vaccines may not yet exist. Emerging diseases are often zoonotic in origin, spilling over from animals to humans due to changing environmental or social conditions. Monitoring for such threats requires robust global surveillance and rapid response capabilities to contain the spread and prevent a potential pandemic. Understanding the drivers of emergence is vital for health security.

160. (A) Both A and R are true and R is the correct explanation of A.
In public health examinations, the assertion and reason format is used to evaluate the ability to connect fundamental concepts with their justifications. An assertion represents a statement of fact or a principle, while the reason provides a logical explanation for that fact. When both statements are true and the reason directly supports the assertion, the logic is considered sound and the explanation correct. This structured approach helps ensure that public health interventions are based on a solid understanding of the underlying scientific and humanitarian principles.

161. (B) Short-term, practical, and focused on coping skills.
Disaster mental health counseling is characterized as a short-term and practical intervention focused on providing immediate emotional support and teaching survivors healthy coping skills. Unlike long-term therapy, its goal is to help individuals manage their acute distress and regain a sense of control following a traumatic event. This approach prioritizes meeting basic needs, fostering social support, and helping survivors navigate the immediate challenges of recovery. By focusing on practical solutions and natural resilience, disaster counseling helps individuals stabilize their emotions and prepare for the long-term process of adaptation.

162. (A) The emergence of antimicrobial resistance.
The One Health approach is critical for addressing complex problems such as the emergence of antimicrobial resistance. By recognizing that the health of humans, animals, and the environment are interconnected, this multisectoral strategy allows for more effective monitoring and control of resistant pathogens. AMR spreads through various pathways, including food, water, and direct contact between species, requiring a holistic solution. Cooperation between human health, veterinary, and environmental sectors is essential for developing integrated surveillance systems and promoting the responsible use of antimicrobial agents to protect the effectiveness of these life-saving drugs.

163. (C) Cyclones, storm surges, and water-borne diseases.
A health vulnerability assessment for a coastal community primarily focuses on risks associated with hazards like cyclones and storm surges, which can cause significant injury and damage to infrastructure. These events also increase the risk of water-borne diseases due to flooding and the contamination of water sources. Understanding these specific threats allows health authorities to develop targeted preparedness and mitigation strategies, such as strengthening local clinics and establishing emergency water systems. By addressing the unique vulnerabilities of coastal areas, communities can enhance their resilience and reduce the overall health impact of climate-related disasters.

NODIA

164. (D) Managing a sudden surge of trauma patients.
In a mass casualty incident resulting from an explosion, the primary health system challenge is managing a sudden and massive surge of trauma patients with varying degrees of injury. This requires the rapid implementation of triage to prioritize life-saving care and the

189. (C) Investigations should only be started after the outbreak has naturally subsided.
Outbreak investigations should be initiated as soon as a potential public health event is detected, rather than waiting for it to subside naturally. Early investigation is essential for identifying the source of contamination and implementing control measures to stop the spread of disease and protect the population. Key tools like the epidemic curve and standard case definitions are used throughout the investigation to monitor the outbreak's magnitude and duration. The ultimate goal of any investigation is to implement effective prevention and control measures to reduce overall morbidity and mortality during the crisis.

190. (A) 1, 2, and 4
Public health surveillance is the ongoing and systematic collection, analysis, and interpretation of health-related data for the primary purpose of taking public health action. This includes investigating unusual patterns and implementing control measures to protect the population. While surveillance is often associated with infectious diseases, it is also used to monitor non-communicable diseases, injuries, and environmental risks. Event-based surveillance is a critical component that uses informal reports to detect potential risks early. Together, these elements provide a comprehensive approach to monitoring public health and ensuring a timely and effective response.

191. (B) A premature relaxation of measures leading to a resurgence.
A key risk during the recovery phase of a pandemic is the premature relaxation of public health measures, which can lead to a resurgence of the disease. As the incidence of cases begins to decline, there is often public and political pressure to return to normalcy. However, if the virus is still circulating and population immunity is not yet sufficient, lifting restrictions too quickly can result in new waves of infection. Maintaining vigilant surveillance and a phased approach to easing measures are essential for ensuring a sustainable recovery and preventing further health and economic impacts.

192. (D) Ensuring a cold chain to maintain vaccine efficacy.
Ensuring a continuous and reliable cold chain is a critical issue during a mass vaccination campaign in a disaster setting. Many vaccines must be kept within a specific temperature range to maintain their efficacy. Disrupted infrastructure and power outages can pose significant challenges to maintaining this cold chain. Without proper temperature control, vaccines can become ineffective, leading to a failure of the immunization effort and wasting limited resources. Establishing robust logistical systems for vaccine storage and transport is essential for the success of any large-scale vaccination program aimed at protecting vulnerable populations during a crisis.

193. (C) An anxiety disorder after exposure to a terrifying event.
Post-Traumatic Stress Disorder is classified as a serious psychiatric disorder that can develop in individuals who have been exposed to a terrifying or life-threatening event. Symptoms often include intrusive memories, severe anxiety, and emotional distress that persist long after the event has occurred. Unlike a normal, transient stress response, PTSD can significantly interfere with an individual's daily life and overall well-being. Recognizing the signs of PTSD and providing access to evidence-based mental health support, such as specialized therapy, are essential components of disaster recovery and the long-term promotion of mental well-being for survivors.

194. (A) It represents the priority services implemented from the onset.
The Minimum Initial Service Package for Sexual and Reproductive Health is named so because it represents the highest priority, life-saving services that must be implemented from the very onset of every emergency. It is designed to be a standardized set of activities that can be rapidly established before more comprehensive care is available. The package focuses on preventing and managing sexual violence, reducing HIV transmission, and ensuring access to emergency obstetric care. By prioritizing these essential services, the MISP helps prevent excess maternal and newborn morbidity and mortality in the critical initial phase of a crisis.

195. (C) 1, 2, and 3

Click Here to Buy book on Amazon

ensuring that appropriate measures are implemented promptly.

171. (A) Determining the objectives, case definitions, and data sources.
The design phase of a public health surveillance system involves determining the specific objectives of the system, establishing clear case definitions, and identifying the most appropriate data sources. This structured approach ensures that the system is focused on capturing the most relevant information needed for public health action. A well-designed system is essential for monitoring health trends, detecting outbreaks early, and evaluating the effectiveness of control programs. By carefully planning the system's components, health authorities can ensure that it provides timely and reliable data for evidence-based decision-making.

172. (B) All waste including infectious and non-infectious.
Healthcare waste encompasses all waste generated by medical facilities, including both infectious and non-infectious materials. This includes sharps, contaminated dressings, and pathological waste, as well as general garbage from administrative areas. While a large proportion of healthcare waste is non-hazardous, the infectious component poses significant risks to health workers and the community if not managed properly. Effective waste management involves segregation at the source, appropriate treatment of infectious materials, and safe final disposal. This process is essential for preventing nosocomial infections and protecting the environment within and around healthcare institutions.

173. (D) Build capacity to detect and report emergencies.
The International Health Regulations represent a global agreement between countries to build and maintain the core capacities needed to detect, assess, and report potential public health emergencies of international concern. This legally binding framework fosters international cooperation and information sharing to prevent the cross-border spread of disease. By strengthening national surveillance and response systems, the IHR protect the entire global community from major health threats. Adhering to these regulations is a critical component of national health security and a vital part of the global effort to manage emerging infectious diseases.

NODIA

174. (D) Expansion into uninhabited areas increasing contact with wildlife.
A major factor contributing to the emergence of zoonotic diseases is the expansion of human activities into previously uninhabited areas, which increases the contact between people and wildlife. This increased proximity facilitates the spillover of novel pathogens from animal populations to humans. Factors such as deforestation, land-use change, and urbanization drive these interactions. Monitoring these high-risk areas and understanding the human-animal interface are essential for the early detection of emerging infectious threats. Addressing these environmental and social drivers is a critical component of global health security and pandemic prevention strategies.

175. (C) 2, 1, 3
Disaster mental health interventions are typically implemented in a sequence starting with Psychological First Aid for immediate distress. This is followed by more general community-based psychosocial support programs aimed at promoting collective well-being and resilience among the affected population. Finally, specialized trauma therapies, such as Cognitive Behavioral Therapy for PTSD, are provided for individuals with more persistent or severe mental health conditions. This tiered approach ensures that support is provided at the appropriate level of intensity and specialization, from the initial crisis through the long-term recovery and adaptation process.

176. (A) To identify hazards and implement measures to reduce harm.
The primary focus of risk management in a health organization is to proactively identify potential hazards and implement measures to reduce the likelihood of harm to patients, staff, and the community. This systematic process involves risk assessment, mitigation planning, and continuous monitoring. By identifying vulnerabilities before an adverse event occurs, health managers can improve patient safety and ensure the continuity of essential services. Effective risk management

providing prosthetic limbs and specialized physiotherapy for amputees. These services are essential for helping individuals regain their independence and reintegrate into their communities. Rehabilitation is a long-term process that requires a multidisciplinary approach and a commitment to providing comprehensive care. By addressing both the physical and psychological needs of injury victims, rehabilitation efforts facilitate a more holistic and sustainable recovery for individuals and society.

153. (C) The Chernobyl nuclear power plant accident.
The Chernobyl nuclear power plant accident is a primary example of a radiological disaster, involving the large-scale release of radioactive materials into the environment. Such events pose significant long-term health risks, including radiation sickness and increased cancer rates. Managing a radiological disaster requires specialized capabilities for monitoring exposure, providing decontamination, and implementing long-term health surveillance for the affected population. Preparedness for nuclear and radiological threats involves international cooperation and the development of rigorous safety protocols to protect both people and the environment from the devastating effects of radiation exposure during an emergency.

154. (D) Conditions increase infection risk while inappropriate use potential is high.
Antimicrobial resistance is a major concern in disaster settings because the often crowded and unhygienic conditions significantly increase the risk of infectious diseases. At the same time, the disruption of regular healthcare can lead to the inappropriate use of antimicrobial drugs, which further drives the development of resistance. This combination makes infections harder to treat and increases the risk of severe illness and mortality. Addressing AMR in emergencies requires ensuring access to appropriate medications, promoting responsible drug use, and maintaining high standards of infection prevention and control within all relief operations.

155. (C) P-3, Q-2, R-1, S-4
Water-borne diseases like cholera are spread through contaminated drinking water. Vector-borne diseases like malaria are transmitted via insect bites. Airborne diseases such as influenza are spread by inhaling droplets from an infected person's cough. Zoonotic diseases like rabies result from contact with an infected animal. Understanding these diverse transmission routes is essential for implementing appropriate public health interventions during a disaster. By targeting the specific mechanism of spread, health authorities can more effectively contain outbreaks and protect the health of vulnerable populations in crowded or unhygienic emergency settings.

156. (A) Track progress, identify problems, and adjust strategies.
The primary purpose of monitoring disease control programs is to track progress toward objectives, identify any emerging problems, and allow for the adjustment of strategies as needed. Monitoring provides a continuous flow of information that helps health managers ensure that interventions are being implemented as planned and are having the desired impact. This ongoing assessment is essential for maintaining program effectiveness and making the most of limited resources. By using monitoring data, health authorities can make evidence-based decisions that improve the overall success of disease control efforts in emergency situations.

157. (A) Food should be cooked thoroughly and served hot to minimize microbial risk.
In emergency kitchens, ensuring food safety is vital for preventing outbreaks of food-borne illness. Food should be cooked thoroughly and served hot to kill any pathogens that may be present. Maintaining high standards of hygiene, including providing handwashing facilities for food handlers and keeping raw and cooked foods separate, is also essential. Using safe water for cooking and cleaning is another critical component of preventing contamination. By following these basic principles, aid organizations can protect the health of vulnerable populations and ensure that food assistance does not inadvertently cause further illness.

158. (D) A comprehensive and integrated approach applicable to all hazards.
The Health-EDRM framework provides a comprehensive and integrated approach to managing health risks and consequences

Downloaded from www.pdf.tube

Biological hazards include pathogenic microorganisms such as viruses, bacteria, and parasites, as well as toxins of biological origin that can cause illness or death in humans, animals, or plants. These hazards pose a significant threat to individual and public health and require specialized containment and safety protocols. Corrosive acid, while hazardous, is a chemical hazard rather than a biological one. Understanding the different types of hazards is essential for developing appropriate preparedness and response strategies to protect the population from diverse threats in both routine and emergency settings.

184. (B) Providing regular training and support to ensure readiness.
Capacity building for Rapid Response Teams involves providing regular training and support to ensure they are fully prepared to be deployed quickly during a public health emergency. This includes training in epidemiology, laboratory diagnostics, and infection control, as well as developing the logistical skills needed for fieldwork. By maintaining a high level of readiness, these teams can initiate effective control measures at the earliest stage of an outbreak, significantly reducing morbidity and mortality. Ensuring the continuous professional development of RRT members is a vital component of emergency preparedness and global health security.

185. (A) Both A and R are true and R is the correct explanation of A.
The uncontrolled distribution of infant formula in emergencies can be harmful because it undermines breastfeeding, which provides essential nutrition and immunity to infants. If the formula is prepared with contaminated water or using unhygienic bottles, it significantly increases the risk of diarrheal diseases and malnutrition, which are major causes of infant mortality in crisis settings. Protecting and promoting breastfeeding while ensuring that any needed substitutes are managed safely is a critical priority for infant and young child feeding in emergencies, ensuring the health and survival of the most vulnerable.

186. (B) A factor that helps buffer against negative psychological effects.

NODIA

A protective factor in disaster mental health is any characteristic or condition that helps buffer an individual or community against the negative psychological effects of a traumatic event. These can include strong social support, healthy coping mechanisms, and access to basic necessities and information. By strengthening these protective factors, health authorities can promote resilience and improve long-term mental health outcomes for survivors. Identifying and supporting the development of protective factors is an essential component of a comprehensive psychosocial response that aims to reduce the overall psychological impact of a disaster and facilitate recovery.

187. (A) The specific agent involved (Chemical, Biological, Radiological, Nuclear, or Explosive).
The management strategy for a CBRNe event is highly dependent on the specific nature of the agent involved, as chemical, biological, radiological, nuclear, and explosive threats require very different response protocols. For instance, a chemical event necessitates rapid decontamination, while a biological event requires intensive surveillance and contact tracing. Understanding the characteristics of each agent is essential for protecting responders and the public and implementing effective medical and public health interventions. Specialized training and equipment are required for the safe and effective management of these complex and high-impact emergencies.

188. (A) Characteristics that make water safe for human consumption.
In the context of emergency water supply, water quality refers to the physical, chemical, and microbiological characteristics that make water safe for human consumption. Ensuring water quality is a fundamental priority to prevent the spread of water-borne diseases like cholera. This involves protecting water sources from contamination, implementing effective treatment methods like chlorination, and monitoring water safety throughout the distribution and storage process. By maintaining high standards of water quality, aid organizations protect the health of vulnerable populations and reduce the risk of large-scale disease outbreaks in humanitarian crises.

mobilization of surgical and emergency medical teams. Overwhelmed facilities must be able to expand their capacity and coordinate with other providers to ensure that all victims receive timely treatment. Effectively managing this surge is critical for reducing mortality and disability in the aftermath of a blast or other high-impact event.

165. (B) 2 and 4 only
A key function of a Health Information System is to provide the reliable and timely data needed for evidence-based decision-making at all levels of the health sector. To ensure its effectiveness, the HIS itself must be subject to regular monitoring and evaluation, allowing for the identification of gaps and the implementation of improvements. While HIS can utilize both paper and digital records, its primary value lies in its ability to manage health information efficiently. A well-functioning HIS is essential for all countries to monitor health trends, allocate resources effectively, and respond to emergencies.

166. (B) An epidemic that has spread over several countries or continents.
In public health, a pandemic is defined as an epidemic of an infectious disease that has spread over a wide geographical area, typically involving several countries or continents, and affecting a large number of people. This classification signifies a global health crisis that requires international cooperation and a coordinated response. Managing a pandemic involves implementing widespread public health measures, such as travel restrictions and mass vaccination, to mitigate the impact on healthcare systems and reduce overall mortality. A pandemic represents a significant challenge to global health security and social and economic stability.

167. (C) Public health measures like vaccination and hygiene promotion.
A main principle of communicable disease control in emergencies is the rapid implementation of high-impact public health measures, such as vaccination campaigns and hygiene promotion. These interventions are designed to quickly reduce the transmission of infectious diseases among vulnerable populations in crowded or unhygienic settings. By providing essential immunity and promoting behavioral changes, health authorities can contain potential outbreaks before they spread widely. This proactive approach is essential for reducing morbidity and mortality and stabilizing the health situation during the critical initial phase of a humanitarian crisis or disaster response.

168. (A) It ensures interventions are appropriate and accepted.
Community involvement is crucial for the success of Water, Sanitation, and Hygiene programs in emergencies because it ensures that interventions are appropriate to the local context and are accepted by the affected population. When community members are involved in the planning and implementation of these programs, they are more likely to use and maintain the facilities provided. This participation fosters a sense of ownership and ensures that hygiene promotion messages are culturally relevant. By empowering the community, health authorities can achieve more sustainable and effective health outcomes during a crisis.

169. (C) The number of deaths caused by the disaster.
In disaster epidemiology, mortality refers to the number of deaths that occur as a direct or indirect result of a disaster. Monitoring mortality rates is essential for understanding the overall magnitude of the health impact and identifying the most significant causes of death. This information allows health authorities to evaluate the effectiveness of relief efforts and prioritize interventions to prevent further loss of life. By quantifying mortality, epidemiologists can also identify vulnerable groups and inform long-term recovery and future disaster preparedness strategies to build more resilient and protected communities.

170. (C) 1, 2, and 5
An outbreak is characterized by the occurrence of cases of a disease in excess of what is normally expected in a specific area or among a particular group. These cases are often linked by time, place, and person, suggesting a common source or mechanism of transmission. In some instances, such as with rare or eradicated diseases, even a single case can be considered an outbreak requiring immediate investigation. Recognizing these criteria is essential for the early detection and control of potential public health threats,

Click Here to Buy book on Amazon

Essential considerations for the safe management of biomedical waste include segregation at the point of generation into categories such as infectious waste and sharps. Using puncture-proof containers for sharps is critical to prevent injury and infection. All infectious waste must be appropriately treated before final disposal to eliminate pathogens. Mixing sharps with general waste or openly burning medical waste in public areas are dangerous practices that pose significant risks to health workers and the community. By following these safety principles, medical facilities protect public health and the environment during both routine operations and emergency situations.

196. (C) Broader, long-term effects on population health and well-being.
The evaluation of a disaster program's impact focuses on measuring the broader and longer-term effects of the intervention on the health and well-being of the affected population. While monitoring tracks immediate outputs, impact evaluation looks at the sustained changes resulting from the program. This can include improvements in disease prevalence, overall mortality rates, and the resilience of the local health system. By understanding the long-term impact, health managers can determine the true value of their interventions and identify the most effective strategies for protecting and improving public health in future disasters.

197. (C) The skills, motivation, and deployment of health workers.
Human resources for health refers to the skills, motivation, and strategic deployment of the entire health workforce, including doctors, nurses, and community health workers. This workforce is the most critical component of any health system, as their dedication and expertise directly determine the quality and accessibility of care. Effective management of HRH involves ensuring appropriate training, fair distribution, and adequate support for staff, especially during high-pressure situations like a disaster. A well-managed and motivated health workforce is essential for achieving universal health coverage and building a resilient system capable of responding to various health challenges.

198. (A) Measles is highly contagious and has high fatality in the displaced.
Measles is a highly contagious respiratory disease and is a major concern in displaced persons camps because it can have a high fatality rate among vulnerable populations. Crowded living conditions, poor sanitation, and underlying malnutrition significantly increase the risk of severe illness and death from measles. Establishing a robust control program, centered on mass vaccination, is a top priority for humanitarian health response. By ensuring high immunization coverage, health authorities can prevent widespread outbreaks and protect the lives of children and other at-risk individuals in crowded emergency shelter environments.

199. (B) To reduce the transmission routes for communicable diseases.
A primary objective of improving environmental conditions in a post-disaster camp is to reduce the various transmission routes for communicable diseases. This involves providing clean water, ensuring safe excreta and solid waste disposal, and implementing effective vector control measures. By creating a more hygienic environment, health authorities can significantly lower the risk of water-borne, faecal-oral, and vector-borne outbreaks among the displaced population. These fundamental public health interventions are essential for protecting the health of vulnerable people living in crowded and temporary settings and facilitating their overall recovery from the disaster.

200. (A) 3, 1, 4, 2
Establishing an emergency water supply begins with estimating the water demand based on the population's survival needs. Potential sources must be identified and assessed for quality and feasibility. From these, the most feasible source and extraction technique are selected to ensure a reliable supply. Finally, the water is treated, stored, and distributed to the population. This systematic approach ensures that safe water is provided in a timely and effective manner, which is critical for preventing the spread of water-borne diseases and protecting the health of affected communities during a crisis.

201. (C) The national health system.

Downloaded from www.pdf.tube

protective measures for the affected population. Preparedness for radiological threats involves international cooperation, specialized training for responders, and the development of long-term health surveillance programs to monitor the delayed effects of radiation exposure on the community and its individuals.

225. (B) 2, 4, 1, 3
The logical flow of data in a Health Information System begins with data collection and its transmission from healthcare facilities and communities. Once collected, the data undergo quality checks and processing to ensure accuracy. The information is then synthesized and analyzed to identify health trends and service gaps. Finally, this analyzed information is used by health managers and policy makers for evidence-based decision-making. This systematic process ensures that the HIS provides the reliable and timely information needed for effective health system management and improved population health outcomes, especially in emergency situations.

226. (C) An occurrence of more cases than expected in a group or area.
In public health, an outbreak signifies the occurrence of more cases of a specific disease than would normally be expected among a particular group of people or in a specific geographical area over a given period of time. Recognizing an outbreak requires vigilant surveillance and a clear understanding of baseline disease levels. Once detected, an outbreak warrants immediate investigation to identify the source and implement control measures to prevent further spread. Timely intervention is essential for protecting the health of the community and containing infectious threats before they escalate into larger epidemics or pandemics.

227. (A) A health-centric approach to disaster risk management.
The WHO Health-EDRM framework promotes a health-centric approach to disaster risk management, ensuring that health is integrated into all phases of the disaster cycle. This comprehensive strategy focuses on reducing health risks and consequences through proactive prevention, preparedness, response, and recovery measures. By emphasizing community resilience and multisectoral cooperation, the framework aims to build more robust and responsive health systems. This holistic perspective ensures that the health sector plays a central role in broader disaster risk reduction efforts, ultimately protecting lives and facilitating more sustainable recovery for affected populations worldwide.

228. (B) Boil the water for at least one minute before consumption.
If water quality cannot be assured in an emergency, the safest household advice is to boil the water for at least one minute before consumption. Boiling is a highly effective method for killing or inactivating a wide range of pathogenic microorganisms, including bacteria, viruses, and parasites. This simple and accessible intervention can significantly reduce the risk of water-borne disease transmission in environments with poor sanitation. While chemical disinfection and filtration are also effective, boiling remains a reliable fallback when other resources are limited, provided that safe storage and handling are practiced afterward.

229. (A) Provide a comprehensive estimate of physical damages and losses.
The main purpose of a Post Disaster Needs Assessment in the health sector is to provide a comprehensive estimate of the physical damages and economic losses sustained by the healthcare system. This evaluation identifies the most urgent requirements for restoring services and rebuilding infrastructure. By providing evidence-based data, the PDNA informs the development of recovery strategies and prioritizes the allocation of resources for reconstruction. The ultimate goal is to facilitate a sustainable recovery that builds back a more resilient health system capable of withstanding future disasters and protecting population health.

230. (B) P-4, Q-2, R-1, S-3
Active surveillance involves health staff proactively seeking out cases from facilities and communities. Passive surveillance relies on routine reporting by health facilities as part of their standard duties. Sentinel surveillance monitors a limited number of selected sites to collect high-quality data on specific conditions. Event-based surveillance detects potential risks from informal sources such as news media or community rumors. Together, these diverse

NODIA

Emerging and re-emerging diseases pose unpredictable and serious threats to global health, often driven by factors like deforestation, urbanization, and international travel. However, the assertion that they can never be controlled or eliminated is incorrect. Many diseases have been successfully managed or even eradicated through effective public health interventions, such as vaccination and improved sanitation. Monitoring these diseases and addressing their underlying drivers are vital for maintaining public health. Continuous investment in surveillance, research, and healthcare infrastructure is essential for building a resilient defense against the ongoing threat posed by various emerging infectious pathogens.

208. (A) Is a non-intrusive support for immediate distress without diagnosis.
Psychological First Aid is a non-intrusive and practical approach focused on providing immediate support to individuals in distress following a disaster, without the need for a clinical diagnosis. Its goal is to provide comfort, ensure safety, and help people access basic needs and social support. In contrast, therapies like Cognitive Behavioral Therapy are structured clinical interventions used to treat specific mental health disorders over a longer term. PFA is a humane response that prioritizes stabilization and the fostering of natural coping mechanisms, making it an essential component of the immediate psychosocial response in emergencies.

209. (A) The health of animals and our shared environment.
The One Health concept explicitly recognizes the inextricable connection between the health of people, animals, and the shared environment. This collaborative approach involving multiple sectors is essential for addressing complex health threats such as zoonotic diseases and antimicrobial resistance. By considering these interconnections, public health strategies can be more comprehensive and effective in preventing and managing outbreaks. This holistic perspective is vital for achieving optimal health outcomes for all species and building a more resilient global health architecture. Adopting One Health is a critical component of modern public health and national security planning worldwide.

210. (A) Both A and R are true and R is the correct explanation of A.
Vector-borne disease control is a critical component of health response in many disaster settings, especially after floods. Flooding often creates numerous new breeding sites for vectors like mosquitoes, which significantly increases the risk of diseases such as malaria and dengue fever. Disruption of normal sanitation and housing further exacerbates these risks for affected populations. Effective management requires implementing robust vector control strategies, such as the use of insecticide-treated nets and environmental management, to protect the health of vulnerable communities and prevent the rapid spread of vector-borne illnesses.

211. (A) To proactively identify and mitigate threats to patient safety.
Risk assessment within a health organization is a proactive process aimed at identifying potential hazards and implementing measures to mitigate threats to patient safety and service continuity. By systematically analyzing the likelihood and severity of various risks, health managers can prioritize threats and allocate resources effectively. This forward-looking approach is essential for preventing adverse events and ensuring the overall resilience of the healthcare system. Effective risk management fosters a culture of safety and continuous improvement, protecting patients and staff and ensuring that the organization can effectively manage various internal and external shocks.

212. (A) Minimum Initial Service Package
In the context of reproductive health in emergencies, MISP stands for the Minimum Initial Service Package. This represents a set of priority, life-saving activities that should be implemented at the very beginning of a crisis. Its primary goals include managing the consequences of sexual violence, preventing excess maternal and newborn mortality, and reducing the transmission of HIV. The MISP ensures that essential reproductive health care is available to vulnerable populations before more comprehensive services can be established. By focusing on high-impact interventions, it helps

Click Here to Buy book on Amazon

The Health Management Information System is an integral part of the larger national health system, providing the essential data needed for effective management and policy-making. It collects information on various aspects of health service delivery, health outcomes, and resource utilization. This data-driven approach is fundamental for monitoring system performance and identifying areas for improvement. A well-functioning HMIS ensures that the national health system is responsive to the needs of the population and can effectively allocate resources to improve overall public health, both in routine situations and during major health emergencies or disasters.

202. (C) A system to track long-term health outcomes of survivors.
A Disaster Registry is a systematic database established to track the long-term health outcomes of individuals who have been exposed to a specific disaster or hazardous event. The registry collects information over time to identify any delayed physical or psychological health effects that may arise. This monitoring is essential for identifying emerging health trends, assessing the effectiveness of interventions, and providing targeted support to those at risk. By facilitating long-term research, a disaster registry provides valuable evidence for improving public health responses and building community resilience against future catastrophic events or exposures.

203. (D) Conduct surveys to identify the vector and breeding sites.
When investigating a suspected vector-borne outbreak, a major consideration is conducting surveys to identify the specific vector involved and its breeding sites. This information is essential for implementing targeted and effective control measures, such as eliminating stagnant water or using indoor residual spraying. By understanding the biology and habitat of the vector, health authorities can more effectively reduce the transmission of the disease within the affected population. Vector control is a critical component of preventing and managing outbreaks of diseases like malaria and dengue fever, especially in crowded or environmentally compromised emergency settings.

204. (B) Early
In the context of public health emergencies, the acronym EWARS stands for Early Warning, Alert and Response System. This system is designed to facilitate the rapid detection of and response to disease outbreaks and other public health threats. By providing a structured mechanism for health workers to report unusual events, EWARS enables authorities to initiate investigations and control measures at the earliest possible stage. This proactive approach is vital for containing infectious diseases before they spread widely, ultimately reducing morbidity and mortality and protecting the health of vulnerable populations in both routine and emergency situations.

205. (C) P-3, Q-2, R-1, S-4
Biosafety involves practices to prevent accidental infection or release of pathogens in a laboratory setting. Biosecurity encompasses measures to protect dangerous pathogens from theft, loss, or intentional misuse. Bioterrorism is the deliberate release of a pathogen to cause public harm and fear. Agents in biological hazard Risk Group 4, such as the Ebola virus, cause severe disease with no available treatment and require the highest level of containment. Understanding these terms is essential for developing comprehensive strategies to protect public health and ensure national and global security against biological threats.

NODIA

206. (B) To build capacity to create a world safe from infectious threats.
A primary goal of the Global Health Security Agenda is to build national and international capacity to create a world that is safe from infectious disease threats. This multi-nation initiative focuses on strengthening systems for the prevention, detection, and response to outbreaks, recognizing that pathogens do not respect international borders. By fostering collaboration and information sharing, the agenda helps countries develop more resilient public health infrastructures. This collective effort is essential for protecting the global population from emerging and re-emerging diseases and ensuring a more rapid and effective response to potential future pandemics.

207. (C) Once a disease emerges, it can never be controlled or eliminated.

monitoring the effectiveness of interventions in containing the disease outbreak.

219. (A) The integration of public and private sector reporting.
A main component of the Integrated Disease Surveillance Project is the integration of both public and private sector reporting into a unified surveillance system. This approach ensures a more comprehensive and accurate picture of disease trends across the entire population. By involving private healthcare providers, the project captures data that might otherwise be missed by a system focused only on public facilities. This integrated data collection is essential for the early detection of outbreaks and for planning effective public health interventions at various levels of the health system, enhancing overall national health security.

220. (B) 1, 2, and 3
Containment strategies during a public health emergency include the quarantine of exposed individuals, the isolation of sick individuals, and the implementation of social distancing measures. These interventions aim to reduce the transmission rate of the pathogen and contain the spread of the disease within the population. By limiting contact between infected or potentially infected people and the rest of the community, health authorities can slow the progression of an outbreak and protect healthcare systems from becoming overwhelmed. These non-pharmaceutical interventions are essential for managing emerging and highly contagious infectious disease threats.

221. (A) Logistics including the cold chain and reaching the population.
A major challenge for mass vaccination campaigns in a disaster setting involves complex logistics, particularly maintaining the cold chain and reaching displaced or isolated populations. Many vaccines require consistent temperature control to remain effective, which is difficult when infrastructure is damaged. Reaching people in remote areas or crowded shelters also requires significant coordination and resources. Overcoming these logistical obstacles is essential for the success of immunization efforts aimed at preventing outbreaks of vaccine-preventable diseases. Effective planning and robust supply chain management are vital for protecting the health of vulnerable groups during a humanitarian crisis.

222. (B) Establishing peer support groups and using local leaders.
A community-based intervention for mental health involves identifying and utilizing local resources, such as establishing peer support groups and engaging community leaders, to promote collective well-being. These interventions focus on empowering the community to support its members through existing social networks and traditional coping mechanisms. By fostering solidarity and mutual aid, these programs reduce the overall psychological impact of a disaster and build resilience. This approach ensures that mental health support is culturally appropriate and sustainable over the long term, helping the entire community recover and adapt to its new circumstances.

223. (C) Zoonotic diseases that originate at the human-animal interface.
The One Health approach is particularly valuable for preventing and controlling zoonotic diseases that originate at the critical interface between humans, animals, and their shared environment. By recognizing these interconnections, the approach enables more effective monitoring and response to potential spillover events. Multisectoral collaboration among public health, veterinary, and environmental professionals allows for the early detection of emerging pathogens and the implementation of integrated control measures. This holistic perspective is essential for managing complex health challenges and building a more resilient global defense against the threat of future pandemics of zoonotic origin.

224. (A) Decontamination, monitoring exposure, and managing radiation sickness.
Managing a radiological disaster, such as a nuclear power plant accident, requires specialized capabilities for decontamination, monitoring individual radiation exposure, and providing treatment for radiation sickness. These events pose unique health risks that necessitate a highly technical and coordinated response. Health authorities must be able to rapidly assess the magnitude of the release and implement

Downloaded from www.pdf.tube

pathogens to spread rapidly among unvaccinated individuals. Preventing these outbreaks requires the rapid implementation of supplementary immunization activities and the strengthening of disease surveillance. Maintaining high vaccination coverage is essential for protecting the health of vulnerable populations and ensuring long-term health security. Addressing these risks is a top priority for humanitarian health response and the rebuilding of resilient healthcare systems.

249. (C) Malaria
Malaria is a primary example of a water-induced disease whose vector, the Anopheles mosquito, is dependent on water for its breeding cycle. Disasters, such as flooding, can create numerous new breeding sites, significantly increasing the risk of malaria outbreaks in affected populations. Controlling malaria in emergency settings requires a combination of vector control measures, such as the use of insecticide-treated nets, and ensuring access to early diagnosis and effective treatment. Understanding the link between environmental conditions and vector-borne disease transmission is essential for implementing appropriate public health interventions and protecting the health of vulnerable communities during and after a crisis.

250. (B) 1, 3, 4, 2
The evolution of global health security is marked by the adoption of key frameworks and the occurrence of significant events. The International Health Regulations established a legal basis for cooperation, followed by the Global Health Security Agenda's focus on capacity building. Recent years saw the widespread use of the Health-EDRM framework and the profound impact of the COVID-19 pandemic. Understanding this chronology is vital for appreciating modern disaster management strategies. These components collectively strengthen global resilience by facilitating international collaboration, information sharing, and the implementation of comprehensive risk management strategies to protect populations from emerging and cross-border health threats.

251. (B) Its capacity to manage shocks and stresses through preparation, absorption, and adaptation.
Resilient health systems are defined by their dynamic ability to withstand various shocks and stresses. This involves a comprehensive approach where the system prepares for potential disasters, absorbs the immediate impact, and effectively adapts to changing circumstances. Furthermore, it focuses on transformation to ensure long-term sustainability and improved functionality during future health crises.

252. (A) The availability and deployment of Human Resources for Health.
The continuous operation of healthcare services during a disaster relies heavily on the strategic deployment of personnel. Human resources for health are considered essential because they provide the necessary clinical expertise and manpower required for frontline response. Without a sufficient and well-organized workforce, the ability of the system to maintain services is significantly compromised.

253. (C) It enables real-time data analysis for informed decision-making.
A robust health information system is a critical pillar of resilient infrastructure. It facilitates the immediate collection and systematic analysis of health-related data during a crisis. This real-time information flow allows healthcare leaders and policymakers to make evidence-based decisions, optimize resource allocation, and improve the overall efficacy of the disaster management response efforts.

254. (D) Evolve to a higher level of functioning and capacity.
Building resilience aims to go beyond simply returning a health system to its previous state. The objective is to foster an evolutionary process where the system learns from the disaster and improves its capabilities. This transformation ensures that the infrastructure achieves a higher level of functionality and preparedness to better handle subsequent catastrophic events.

255. (C) To identify weaknesses and guide the development of more sustainable systems.
Systematic evaluative processes are essential for the continuous improvement of disaster-related initiatives. By monitoring performance, health systems can identify specific vulnerabilities and areas of failure. This feedback loop fosters critical learning and provides the necessary guidance for developing more sustainable and robust

NODIA

methods provide a comprehensive and robust approach to monitoring public health threats and enabling a timely and effective response to potential outbreaks and other major health emergencies.

231. (B) The economy by attacking livestock, crops, and the food supply.
Agroterrorism is a specific form of bioterrorism that targets the agricultural sector to cause widespread disease in livestock and crops. Its primary goal is to cause massive economic disruption and threaten food security. Preventing agroterrorism requires robust biosecurity measures on farms, effective surveillance for unusual animal or plant health events, and international cooperation. Protecting the food supply chain is a critical component of national security and ensuring stability for the population during a crisis. Understanding these economic and humanitarian threats is essential for developing comprehensive disaster management and national security strategies.

232. (C) An emerging disease
An emerging disease is an infectious condition that has appeared in a population for the first time. These diseases pose significant public health challenges because the population has no prior immunity, and medical treatments or vaccines may not yet be developed. Many emerging diseases are zoonotic in origin, spilling over from animal populations to humans due to changing environmental or social factors. Monitoring for these threats requires robust global surveillance and rapid response capabilities to contain the spread and prevent potential pandemics. Understanding the drivers of disease emergence is vital for health security.

233. (C) Forcing individuals to narrate their traumatic experiences to a large group.
General psychosocial support in emergencies involves providing accurate information, reuniting separated families, and ensuring basic needs such as safety, food, and water are met. These measures aim to restore a sense of security and support natural coping mechanisms. Forcing individuals to narrate their traumatic experiences in a large group is not a recognized or helpful practice and can be counterproductive or harmful. Psychosocial support should be humane, non-intrusive, and culturally appropriate, focusing on empowering survivors and promoting their well-being and resilience throughout the recovery and adaptation process after a disaster.

234. (C) Distributing exotic and expensive food items to all survivors.
Food safety in an emergency focuses on protecting food from contamination, cooking it thoroughly to kill pathogens, and ensuring safe storage to prevent spoilage and microbial growth. These principles are essential for preventing food-borne illness among vulnerable populations. Distributing expensive or exotic foods is not a component of food safety and is not a priority in humanitarian assistance, which focuses on providing nutritious and safe staple foods. Ensuring that all food assistance is handled and prepared hygienically is a critical part of protecting the health and overall well-being of survivors during a humanitarian crisis.

235. (A) Both A and R are true and R is the correct explanation of A.
A well-functioning Health Information System is a cornerstone of a resilient health system because it provides the timely and reliable data needed for effective decision-making. During and after a disaster, this information is essential for situation analysis, resource allocation, and the monitoring of response and recovery efforts. Without accurate data on health status and service delivery, health managers cannot effectively target interventions to those most in need. By strengthening the HIS, countries can improve their ability to respond to emergencies and build a more robust and responsive healthcare infrastructure for the entire population.

236. (B) Establishing a pre-disaster baseline to measure impact and response.
A major challenge in the monitoring and evaluation of health systems in disaster-prone areas is the difficulty of establishing a pre-disaster baseline. Without accurate data on health status and service delivery before the event, it is difficult to measure the true impact of the disaster and evaluate the effectiveness of the response. Strengthening routine health information systems is essential for providing this baseline data. Having a clear understanding of the pre-disaster situation allows health managers

Click Here to Buy book on Amazon

to more effectively track recovery progress and identify the long-term changes needed to build a more resilient and protected health system.

237. (A) Geographical scale
The primary difference between an epidemic and a pandemic is the geographical scale of the disease outbreak. An epidemic is an occurrence of cases in excess of normal expectancy in a specific community or region. A pandemic is an epidemic that has spread across several countries or continents, often affecting a large proportion of the global population. While both signify a public health crisis, a pandemic requires a higher level of international coordination and the implementation of widespread measures, such as mass vaccination and travel restrictions, to contain the global spread and protect populations worldwide.

238. (A) Eliminating mosquito breeding sites and promoting personal protection.
Controlling vector-borne diseases like dengue in emergency settings focuses on eliminating mosquito breeding sites and promoting personal protective measures. This includes managing stagnant water where mosquitoes lay their eggs and encouraging the use of insect repellent and protective clothing. These environmental and behavioral interventions are highly effective in reducing the transmission rate of the disease. In crowded displaced persons camps, where environmental conditions often favor vector breeding, robust vector control strategies are essential for protecting the health of vulnerable communities and preventing the rapid spread of dengue and other mosquito-borne illnesses.

239. (B) A descriptive study
A descriptive study in epidemiology is one that describes the distribution of a disease or health condition in a population by time, place, and person. These studies are essential for identifying patterns of disease occurrence and formulating hypotheses about potential risk factors. In the context of disaster management, descriptive epidemiology provides the initial evidence needed to understand the health impact of the event and identify the most vulnerable groups. This information is vital for planning effective public health interventions and allocating limited resources to where they are most needed to protect lives and facilitate recovery.

240. (A) 1, 2, and 3
Outbreak response focuses on controlling the spread of disease, with communication to the public serving as a critical component. Effective response measures must be based on the findings of a systematic investigation to ensure they are targeted and effective. Ongoing investigation remains necessary throughout the response to monitor the situation and adjust strategies as needed. By combining clinical care, public health interventions, and clear communication, health authorities can more effectively contain potential epidemics and protect the health of the community, ultimately reducing overall morbidity and mortality during a humanitarian crisis or other emergency event.

241. (A) To achieve global security through international cooperation.
A primary objective of the International Health Regulations is to achieve global health security through coordinated international cooperation in preventing, detecting, and responding to major health risks. These regulations require member states to build national core capacities for surveillance and response and to notify the World Health Organization of potential public health emergencies of international concern. By fostering a collective defense against the cross-border spread of disease, the IHR protect the global community from infectious threats. Adhering to this legally binding framework is a critical component of national security and sustainable global health development for all countries.

242. (A) Nosocomial (hospital-acquired) infections among patients and staff.
Managing healthcare waste is a critical priority for preventing nosocomial, or hospital-acquired, infections among patients and medical staff. Infectious materials and sharps, if not handled and disposed of safely, pose a high risk of transmitting blood-borne and other pathogens within the facility. Effective waste management involves segregation at the source, appropriate treatment of infectious waste, and safe final disposal. This process is essential for maintaining a safe and hygienic environment within

NODIA

healthcare institutions. By protecting both staff and patients, proper waste management ensures the quality and safety of healthcare services, especially during high-pressure emergency situations.

243. (D) Universal access to clean water and sanitation.
Universal access to clean water and sanitation is a primary public health measure that prevents the emergence and spread of many infectious diseases, rather than contributing to it. The emergence of new diseases is typically driven by factors such as microbial adaptation, international travel, and a breakdown in public health infrastructure. These drivers facilitate the spillover of pathogens and their rapid transmission across borders. Maintaining strong public health systems and ensuring access to essential services are vital for global health security and the prevention of future outbreaks. Addressing these complex drivers is essential for building resilient and protected communities.

244. (A) Providing practical support, coping skills, and a listening ear.
Disaster mental health counseling is best described as providing immediate practical support, teaching healthy coping skills, and offering a compassionate listening ear to survivors. Its goal is to help individuals manage their acute emotional distress and regain a sense of control in the aftermath of a traumatic event. This approach prioritizes meeting basic needs, fostering social support, and helping survivors navigate the initial challenges of recovery. By focusing on practical solutions and natural resilience, disaster counseling helps individuals stabilize their emotions and prepare for the long-term process of psychological adaptation and recovery within their community.

245. (B) 2, 3, and 4
Key principles of the One Health concept include the recognition that human health is inextricably linked to animal and environmental health, necessitating collaboration across multiple disciplines. This multisectoral approach is applicable at local, national, and global levels to address complex health challenges. Zoonotic diseases are a major focus, as they emerge at the human-animal-environment interface. By fostering cooperation among public health, veterinary, and environmental professionals, One Health enables more effective prevention and response strategies. This integrated perspective is essential for building resilient systems and ensuring a comprehensive defense against diverse and emerging health threats.

NODIA

246. (A) Triage and management of life-threatening trauma (the ABCs).
In the immediate aftermath of a blast injury caused by an explosion, the priority is the rapid triage and management of life-threatening trauma following the ABCs (Airway, Breathing, and Circulation). Explosive events often result in severe, multi-system injuries that require immediate medical intervention to prevent death and disability. Establishing an effective triage system ensures that the most critically injured receive care first. This acute medical response is a fundamental component of disaster trauma care, necessitating coordinated efforts by emergency medical teams and hospitals to manage the sudden surge of patients and provide life-saving treatment in a timely manner.

247. (A) Reduce maternal and newborn mortality and morbidity.
The primary goal of ensuring safe motherhood in a disaster setting is to reduce maternal and newborn morbidity and mortality, which often increase significantly during crises due to disrupted services and poor living conditions. This involves ensuring access to clean delivery kits, emergency obstetric care, and specialized support for pregnant women and their infants. By prioritizing these high-impact reproductive health interventions, aid organizations can protect one of the most vulnerable groups in an emergency and ensure that life-saving care is available even under difficult circumstances. Protecting maternal and newborn health is a critical component of an equitable and effective health response.

248. (A) The resurgence of vaccine-preventable diseases like measles and polio.
The breakdown of routine vaccination programs during a prolonged disaster poses a significant risk for the resurgence of vaccine-preventable diseases such as measles and polio. Disrupted services and population movement create ideal conditions for these highly contagious

protect lives and maintain health during the critical initial response.

213. (A) It can lead to treatment failure and increased mortality.
Antimicrobial resistance is a major public health concern because it leads to treatment failure, as common infections become resistant to the drugs previously used to treat them. This increases the risk of severe illness, long-term disability, and death. AMR also increases healthcare costs as more expensive or intensive treatments are needed. The development and spread of resistant pathogens are accelerated by the misuse of antimicrobial agents. Addressing this global threat requires a coordinated effort to promote the responsible use of these life-saving drugs and to strengthen infection prevention and control across all healthcare sectors.

214. (C) Tertiary healthcare
Tertiary healthcare is the tier of services that provides highly specialized and complex diagnostic and treatment options. These institutions serve as referral centers for primary and secondary care facilities, managing patients with severe or rare conditions that require expert personnel and advanced medical technology. Tertiary care centers often involve university-affiliated hospitals where teaching and research are also conducted. Ensuring that these centers remain functional during a disaster is crucial for the continuity of care for the most critically ill or complex patients, providing a vital safety net within the overall national health system.

215. (A) 1 and 3 only
Disasters frequently lead to the destruction of health infrastructure, which disrupts essential services and creates significant challenges for maintaining population health. This situation is often coupled with an increased risk of communicable diseases due to poor living conditions, overcrowding, and compromised sanitation in emergency settings. While the psychological impact is often significant and chronic diseases are frequently exacerbated, the primary and most immediate consequences are infrastructure damage and infectious disease outbreaks. Understanding these multifaceted impacts is essential for planning a comprehensive and resilient health response that addresses both acute and long-term needs.

216. (B) Faecal-oral diseases like cholera and typhoid.
Safe disposal of human excreta in an emergency is primarily aimed at preventing the transmission of faecal-oral diseases such as cholera, typhoid, and various diarrheal illnesses. Improper management of human waste can lead to the rapid contamination of water sources and the surrounding environment, especially in crowded displaced persons camps. Establishing effective sanitation facilities provides a critical barrier between pathogens and the population. This fundamental component of public health and hygiene promotion is essential for reducing morbidity and mortality rates and maintaining overall hygiene and safety during a humanitarian crisis or disaster.

217. (A) Following a group over time to see who develops a health outcome.
A cohort study in disaster epidemiology involves following a specific group of individuals over a period of time to observe which health outcomes they develop. This longitudinal approach allows researchers to identify risk factors and understand the long-term health consequences of disaster exposure. Cohort studies are particularly valuable for tracking delayed effects, such as post-traumatic stress disorder or chronic health conditions, that may emerge years after the initial event. By monitoring a defined group, epidemiologists can provide evidence-based insights that inform targeted support for survivors and improve future disaster management and public health strategies.

218. (A) Help determine the likely period of exposure and spread pattern.
An epidemic curve is a graph that plots the number of disease cases by their date of illness onset. In an outbreak investigation, it is a critical tool used to visualize the magnitude and time trend of the event. Analyzing the shape of the curve helps epidemiologists determine the likely period of exposure and understand the pattern of spread, such as whether it originated from a common source or through person-to-person transmission. This information is essential for implementing targeted control measures and

Downloaded from www.pdf.tube

frameworks that are better equipped to withstand future health emergencies.

256. (B) An epidemic affects a large region, while a pandemic spreads across countries or continents. Epidemiological terms categorize disease spread based on geographic scale. While an epidemic refers to a sudden increase in cases that impacts a large region or community, a pandemic represents a more extensive global threat. Specifically, a pandemic is an epidemic that has crossed international borders, affecting people across several different countries or entire continents.

257. (D) To provide a comprehensive approach for managing the health consequences of disasters.
The Health Emergency and Disaster Risk Management Framework provides a structured and holistic methodology for addressing health-related risks. It focuses on the comprehensive management of various health consequences resulting from disasters. By integrating public health preparedness and response strategies, the framework aims to reduce mortality and morbidity while strengthening the overall resilience of the health system.

258. (A) The development of plans and capacities before an emergency.
Preparedness is a proactive phase of disaster management that takes place prior to an event. It involves the systematic development of response plans, the building of essential capacities, and the training of personnel. By establishing these foundations early, health systems can ensure a more efficient and effective intervention when a public health emergency eventually occurs.

259. (C) The occurrence of communicable diseases.
Emergencies often create conditions that facilitate the rapid transmission of infectious agents. Communicable diseases pose a major threat in these settings due to disrupted infrastructure, overcrowding, and compromised sanitation. Managing these risks through established prevention and control principles is a priority to prevent secondary health crises from developing alongside the primary disaster event.

260. (A) Rigorous monitoring, evaluation, and research.
Ensuring that disease control efforts achieve their intended impact requires a scientific and evaluative approach. Continuous monitoring and rigorous research allow health officials to assess the effectiveness of interventions in real-time. This evidence-based practice is vital for making necessary adjustments to programs in both emergency and non-emergency settings, thereby maximizing the protection of public health.

261. (D) To prevent the rapid proliferation of related diseases.
Providing adequate water, sanitation, and hygiene services is vital during emergencies to mitigate severe health risks. Inadequate conditions allow water-borne, water-induced, and vector-borne diseases to spread extremely quickly among vulnerable displaced populations. Rapid intervention in these areas is essential for preventing large-scale outbreaks and maintaining the overall health status of the affected community.

262. (B) The active involvement of the community in hygiene promotion.
Successful hygiene promotion strategies rely heavily on active participation from the affected population. Involving the community ensures that interventions are culturally appropriate and increases the likelihood of sustained behavioral change. This empowerment allows individuals to play a proactive role in their own disease prevention efforts, making it a fundamental element of any comprehensive WASH response.

NODIA

263. (C) A targeted water and sanitation intervention.
When facing a cholera outbreak, health authorities must implement highly specific interventions focused on the transmission pathway. A targeted water and sanitation response is essential to interrupt the spread of the causative bacteria. This includes ensuring safe drinking water sources and proper excreta disposal to prevent further contamination, which are the most effective means of control.

264. (D) Implementing financial incentives for hygiene practices.
Environmental health interventions in emergency settings prioritize technical and behavioral strategies. Key components include ensuring the safety and availability of water, managing

(C) A is true but R is false.
(D) A is false but R is true.

9. In ecology, the term 'ecosystem' refers to:
(A) A group of individuals of the same species living in an area.
(B) The physical environment where an individual organism lives.
(C) A community of living organisms interacting with their physical environment.
(D) The total number of species residing in a given geographical region.

10. The concept of 'ecological niche' primarily encompasses which of the following?
(A) The organism's functional role and position in its ecosystem.
(B) Only the physical space an organism occupies in the environment.
(C) The organism's diet and reproductive cycle exclusively.
(D) The geographical distribution of a species across continents.

11. Which one of the following is an example of a non-renewable resource?
(A) Geothermal energy
(B) Biomass
(C) Hydropower
(D) Fossil fuels

12. The study of the interactions of a single species with its environment is known as:
(A) Synecology
(B) Autecology
(C) Population ecology
(D) Community ecology

13. What is the most appropriate description of a 'food web'?
(A) A linear sequence of organisms where nutrients and energy are transferred.
(B) A graphical representation of the biomass at each trophic level.
(C) A network of interconnected food chains in an ecological community.
(D) The total mass of living matter present in a given area.

14. Match List I with List II regarding ecosystem components and functions.

List I:
P. Producers
Q. Decomposers
R. Abiotic Components
S. Primary Consumers

List II:
1. Herbivores
2. Sunlight, Water, Soil
3. Autotrophs
4. Fungi and Bacteria

(A) P-3, Q-4, R-2, S-1
(B) P-1, Q-2, R-3, S-4
(C) P-3, Q-1, R-4, S-2
(D) P-4, Q-3, R-1, S-2

15. The 'pyramid of energy' in an ecosystem is always upright because:
(A) Energy is lost as heat at each successive trophic level.
(B) Producers have the smallest biomass in most environments.
(C) Decomposers recycle all energy back to the producers.
(D) Top carnivores are the most numerous organisms in the chain.

16. Which concept refers to the capacity of social, economic, and environmental systems to cope with a hazardous event or disturbance?
(A) Ecological Balance
(B) Climate Resilience
(C) Population Dynamics
(D) Occupational Health

17. Which of the following best represents a threat to biodiversity?
(A) Genetic diversity within a population
(B) Habitat destruction and fragmentation
(C) Sustainable use of forest resources
(D) In-situ conservation efforts

18. In the context of environmental health, what does 'Ozone layer depletion' primarily lead to?
(A) An increase in the amount of harmful ultraviolet radiation reaching Earth.
(B) An increase in global average temperatures.
(C) The formation of acid rain in industrial areas.
(D) A decrease in the concentration of atmospheric carbon dioxide.

Click Here to Buy book on Amazon

273. (D) The suspected mode of disease transmission.
The approach taken during an outbreak investigation is highly dependent on how the disease is believed to spread. Specific methodologies are required based on whether the suspected mode of transmission is through food, water, air, or vectors. Tailoring the investigation in this way ensures that the source of the pathogen is correctly identified and effectively neutralized.

274. (A) Tracing food histories of the affected individuals.
When investigating a potential food-borne outbreak, identifying the specific source of contamination is the main priority. Investigators focus on tracing the food consumption histories of individuals who have become ill. This process, combined with the laboratory analysis of food samples, helps pinpoint the contaminated item, allowing for targeted control measures like recalls or public health warnings.

275. (C) To implement control measures for the prevention of future outbreaks.
The primary objective of conducting a thorough outbreak investigation goes beyond simply understanding the current event. It aims to implement effective control measures that interrupt the cycle of disease transmission. By identifying causes and risk factors, public health officials can prevent future occurrences of the same disease, ultimately protecting the health and safety of the community.

276. (A) Indicator-based surveillance uses structured data, while Event-based uses unstructured information.
Surveillance systems utilize different types of data to monitor public health threats. Indicator-based surveillance relies on the routine reporting of structured information, such as specific disease case numbers from healthcare facilities. In contrast, event-based surveillance focuses on the rapid capture of unstructured information, including media reports or community rumors, which may indicate emerging health risks.

277. (D) To serve as an early warning system for health emergencies.
Public health surveillance is a continuous and systematic process essential for modern public health practice. Its primary function is to serve as an early warning system that detects impending health emergencies. By monitoring health-related data over time, officials can plan, implement, and evaluate effective interventions to mitigate the impact of diseases and other hazards on populations.

278. (B) A system that integrates both Indicator-based and Event-based surveillance.
The Integrated Disease Surveillance Project is a national initiative designed to enhance disease monitoring capabilities. It is characterized by its integration of both indicator-based and event-based surveillance methodologies. This comprehensive approach allows for the effective monitoring of disease trends and the rapid detection of outbreaks, ensuring a more robust and responsive public health system across the country.

279. (C) Delays in data analysis that can hinder timely action.
Several challenges can undermine the effectiveness of public health surveillance systems. Delays in the analysis of collected data are particularly problematic, as they can hinder the ability of officials to take timely action. Other common issues include the under-reporting of cases and concerns regarding data quality, both of which can lead to an inaccurate assessment of threats.

NODIA

280. (D) To facilitate rapid detection and response in emergency settings.
The Early Warning, Alert and Response System is a specialized tool often utilized in humanitarian and emergency contexts. Its primary role is to facilitate the rapid detection of potential health threats in environments where traditional systems may be disrupted. By providing timely alerts, it enables a quick and effective response to manage disease outbreaks and other public health crises.

281. (A) Biosafety is about protecting people from pathogens, while biosecurity is about protecting pathogens from misuse.
Biosafety and biosecurity are related but distinct concepts in the management of biological hazards. Biosafety focuses on implementing practices and controls to protect individuals and the environment from accidental exposure

By focusing on this connection, health systems can better detect potential zoonotic threats and implement early interventions to prevent large-scale outbreaks.

299. (B) Chemical, Biological, Radiological, Nuclear, and explosive.
CBRNe is a standard acronym used in disaster management to categorize a specific group of high-consequence threats. It stands for Chemical, Biological, Radiological, Nuclear, and explosive hazards. Managing these types of disasters requires highly specialized knowledge, equipment, and strategies due to the unique risks they pose to public health, safety, and the environment during both natural and man-made events.

300. (A) Collaborative, multisectoral, and transdisciplinary work.
The implementation of a One Health approach necessitates a departure from traditional, isolated methods of operation. It promotes a style of work that is collaborative, multisectoral, and transdisciplinary in nature. By bringing together experts from various fields—such as medicine, veterinary science, and environmental studies—this approach fosters a more comprehensive and effective response to complex global health challenges and disasters.

Downloaded from www.pdf.tube

Gaining a deep understanding of how diseases emerge and re-emerge is vital for effective public health planning. This knowledge allows health authorities to develop surveillance and response strategies that are specifically tailored to the unique transmission patterns and risks of these threats. Such proactive measures are necessary to detect and control potential crises before they escalate into major events.

291. (C) A humane and supportive early intervention for those who are suffering.
Psychological First Aid is a foundational early intervention used in the immediate aftermath of a disaster. It is defined as a humane and supportive response provided to individuals who are suffering and in need of assistance. Unlike formal therapy, it focuses on providing basic emotional support and practical help to stabilize individuals and connect them with further resources.

292. (A) A more severe mental health condition that can develop in a subset of the affected population.
While most people exhibit normal stress reactions following a traumatic event, some individuals may experience more persistent and debilitating symptoms. Post-Traumatic Stress Disorder is a severe mental health condition that develops in a subset of the affected population. Understanding the factors that lead to its development is essential for identifying those at risk and providing appropriate long-term clinical care.

293. (D) Cognitive Behavioral Therapy (CBT).
When individuals experience more advanced or persistent psychological symptoms following a disaster, specialized clinical interventions are necessary. Cognitive Behavioral Therapy is an evidence-based treatment often used in these cases. It focuses on helping individuals manage their symptoms by changing thought patterns and behaviors related to the trauma, forming part of a continuum of care beyond initial support.

294. (B) To leverage social support and promote collective resilience.
Community-based interventions play a crucial role in disaster mental health by focusing on the collective well-being of the affected group. These strategies are designed to leverage existing social support networks and promote resilience within the community itself. By fostering social cohesion and mutual aid, these interventions help populations recover together, complementing individual therapies and specialized psychological services.

NODIA

295. (C) A spectrum of support, from immediate aid to long-term therapy.
The field of disaster mental health addresses the comprehensive psychological needs of individuals and groups affected by catastrophic events. It is concerned with providing a continuum of care that ranges from immediate aid to long-term therapeutic options. Additionally, it encompasses the management of stress and the promotion of well-being for the disaster responders who are also exposed to trauma.

296. (D) The health of people, animals, and the environment are closely connected.
The One Health concept is based on the fundamental principle that the health of humans, animals, and the environment are inextricably linked. This integrated framework recognizes that changes in one area can significantly impact the others. By acknowledging these connections, health professionals can better understand disease dynamics and develop more effective strategies for preventing and managing diverse health threats.

297. (A) The provision of Sexual and Reproductive Health services.
The Minimum Initial Service Package is a set of priority activities designed to be implemented at the start of every humanitarian emergency. Its specific purpose is to ensure the availability of essential sexual and reproductive health services. This protocol addresses critical needs, such as maternal health care and prevention of sexual violence, to protect the well-being of vulnerable populations from the onset.

298. (B) Because many health threats, like emerging diseases, originate at the human-animal-environment interface.
Adopting a One Health approach is essential for effective disaster preparedness because it addresses the root causes of many health crises. A significant number of emerging infectious diseases originate at the interface where humans, animals, and the environment interact.

to pathogens. Biosecurity, however, involves measures designed to protect biological materials from unauthorized access or intentional misuse, effectively protecting the pathogens themselves from people with harmful intent.

282. (B) Defines countries' obligations for reporting major public health events.
The International Health Regulations represent a legally binding international framework for global health security. Their main purpose is to define the obligations of countries in reporting major public health events that could spread internationally. This system ensures that Public Health Emergencies of International Concern are identified and managed through global cooperation, minimizing disruptions to international travel and trade.

283. (B) To limit the spread of the biological agent.
Managing biological disasters requires the rapid implementation of specific strategies to minimize the impact on public health. Early warning systems are crucial for detecting the presence of a biological hazard at the earliest possible stage. Once detected, containment strategies are employed to limit the geographic spread of the agent, thereby reducing the number of people exposed and infected.

284. (A) The International Health Regulations (IHR).
A Public Health Emergency of International Concern is a formal declaration made by the World Health Organization under the International Health Regulations. It signifies an extraordinary event that poses a public health risk to other states through the international spread of disease. This term is central to the global framework governing how nations collaborate to manage major cross-border health threats.

285. (C) The development of specialized capacity and response protocols.
Intentional biological threats, such as those from warfare or bioterrorism, present unique challenges compared to naturally occurring outbreaks. Successfully addressing these deliberate acts requires the development of specialized capacity and dedicated response protocols. These measures are designed to detect unauthorized use of biological agents and provide a rapid, coordinated intervention to protect the population and national security.

286. (D) A disease that has declined but is once again becoming a health problem.
Disease dynamics are categorized by their historical patterns in a population. A re-emerging disease refers to an illness that was once a significant public health problem but then saw a dramatic decline in cases. However, it is now becoming a major health issue again due to various factors, necessitating renewed attention from surveillance and control programs.

287. (C) Zoonosis.
Zoonosis is the scientific term used to describe the process where pathogens are transmitted from animals to humans. These infections can be caused by various agents, including viruses, bacteria, or parasites. Understanding zoonotic pathways is vital for public health because a large majority of emerging infectious diseases originate in animal populations before crossing over to affect human communities.

288. (B) It is rapidly increasing in incidence or geographic range.
Emerging diseases represent new or evolving threats to public health security. They are characterized by their appearance in a population for the first time or by a rapid increase in their incidence or geographic range. Monitoring these diseases is essential, as their novel nature often means that the human population has little to no pre-existing immunity against them.

289. (D) represent a substantial portion of newly identified infectious diseases.
The significance of zoonotic diseases lies in their prevalence among new health threats. They represent a substantial portion of all newly identified infectious diseases globally. Because pathogens can move between species, the animal-human interface becomes a critical point for disease emergence, requiring integrated monitoring strategies that consider both human and veterinary health to prevent future pandemics.

290. (A) To allow for the development of tailored surveillance and response strategies.

Click Here to Buy book on Amazon

CHAPTER 07

Environment, Ecology and Climate Change Aspects

1. Which of the following is best described as a renewable energy resource?
(A) Coal
(B) Solar power
(C) Natural Gas
(D) Petroleum

2. What is the fundamental difference between habitat and ecological niche?
(A) Habitat is the 'address' of an organism, while niche is its 'profession' or functional role.
(B) Niche is the physical space where an organism lives, while habitat is its role in the food web.
(C) Habitat applies only to plants, whereas niche applies only to animals.
(D) There is no significant difference; the terms are interchangeable in ecology.

3. Which of the following statements about energy flow in an ecosystem is incorrect?
(A) Energy flows in a unidirectional manner.
(B) There is a progressive loss of energy at each trophic level.
(C) Energy is created by producers and destroyed by decomposers.
(D) The flow of energy follows the laws of thermodynamics.

4. The 'London Smog Disaster' is a classic case study primarily associated with which type of pollution?
(A) Water pollution
(B) Soil pollution
(C) Marine pollution
(D) Air pollution

5. Consider the following statements regarding Natural and Energy Resources:
I. Non-renewable resources can be replenished within a human lifespan.
II. Forest resources are considered a type of renewable resource.
III. Water is a finite but cyclically renewable resource.
IV. Biodiversity is not considered a natural resource.
Which of the above statements are correct?
(A) I and IV only
(B) II and III only
(C) I, II and III only
(D) II, III and IV only

6. Consider the following statements:
Statement I : The origin, composition, and structure of the atmosphere are key components of climatology.
Statement II : The hydrological cycle is independent of the atmospheric heat budget.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

7. Which of the following is NOT a direct threat to biodiversity?
(A) Habitat fragmentation
(B) Over-exploitation of species
(C) Introduction of invasive alien species
(D) Establishment of protected areas

8. **Assertion (A) :** The concern for the environment has become a global issue in recent decades.
Reason (R) : The impacts of environmental degradation, such as pollution and climate change, often transcend national boundaries.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.

Downloaded from www.pdf.tube

direction.

29. Consider the following statements:
Statement I : Population dynamics studies the structural and functional aspects of a population.
Statement II : Death antagonism refers to the competitive struggle for survival within a population.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

30. Consider the following statements about Environmental Pollution:
I. Pollution can only originate from man-made sources.
II. Thermal pollution is the degradation of water quality by any process that changes ambient water temperature.
III. Soil pollution can be caused by the excessive use of pesticides.
IV. The cost of pollution management refers only to the cleanup process after a pollution event.
Which of the above statements are correct?
(A) I and IV only
(B) II and III only
(C) I, II and III only
(D) II, III and IV only

31. In climatology, 'insolation' refers to:
(A) The amount of incoming solar radiation received at the Earth's surface.
(B) The trapping of heat by greenhouse gases.
(C) The process of water changing from liquid to gas.
(D) The movement of air from high-pressure to low-pressure areas.

32. What is the main purpose of an audiometric test in an occupational health context?
(A) To measure an employee's lung capacity.
(B) To evaluate an employee's hearing ability.
(C) To assess the visual acuity of a worker.
(D) To check the vital functions like heart rate and blood pressure.

33. **Assertion (A) :** In an ecosystem, the pyramid of biomass can be inverted.
Reason (R) : The biomass of producers in some aquatic ecosystems, like phytoplankton, may be less than the biomass of the herbivores that feed on them.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

34. A hailstorm is a form of:
(A) Solid precipitation.
(B) Gaseous precipitation.
(C) Liquid precipitation.
(D) Atmospheric deposition.

35. The Incident Recall Technique (IRT) is a method used for:
(A) Forecasting natural disasters.
(B) Assessing biodiversity loss.
(C) Accident investigation.
(D) Measuring pollution levels.

36. An 'unsafe act' in the context of accident prevention is:
(A) A hazardous condition inherent in the workplace environment.
(B) A malfunction of a piece of safety equipment.
(C) A natural phenomenon that causes an accident.
(D) A violation of a commonly accepted safe work procedure.

NODIA

37. Which of the following is a key characteristic of community dynamics?
(A) Static population sizes.
(B) Absence of inter-species interaction.
(C) Ecological succession.
(D) Uniform distribution of resources.

38. The classification of world climates by Koppen is primarily based on:
(A) Atmospheric pressure and wind patterns.
(B) Annual and monthly averages of temperature and precipitation.
(C) Soil type and vegetation density.
(D) Elevation and proximity to oceans.

19. All of the following are considered biogeochemical cycles EXCEPT:
(A) The Carbon Cycle
(B) The Nitrogen Cycle
(C) The Energy Flow Cycle
(D) The Water Cycle

20. Consider the following statements about Ecology and Ecosystems:
I. An ecological niche is solely defined by the physical location of an organism.
II. Ecosystems can be both aquatic and terrestrial.
III. The functional components of an ecosystem include energy flow and nutrient cycling.
IV. Biogeochemical cycles involve both biotic and abiotic components.
V. A habitat can be shared by multiple species, but a niche is unique to a species.
Which of the above statements are correct?
(A) I, II and III only
(B) II, III and IV only
(C) II, III, IV and V only
(D) I, IV and V only

21. The sequence of eating and being eaten in an ecosystem is technically called:
(A) A food web
(B) A trophic level
(C) A food chain
(D) An ecological pyramid

22. Ecosystem-based Disaster Risk Reduction (EcoDRR) primarily focuses on:
(A) Building concrete barriers and seawalls.
(B) Utilizing and managing ecosystems to reduce disaster risk.
(C) Developing early warning systems using satellite technology.
(D) Providing financial aid after a disaster has occurred.

23. Which of the following is a primary source of air pollution?
(A) Agricultural runoff
(B) Oil spills in the ocean
(C) Plastic waste in landfills
(D) Industrial emissions

24. What is the fundamental principle of the First Law of Thermodynamics in the context of an ecosystem?
(A) Energy cannot be created or destroyed, only transformed.
(B) In any energy transfer, some energy is lost as heat.
(C) Energy flows from a lower trophic level to a higher one.
(D) All energy in an ecosystem originates from the sun.

25. Arrange the following layers of the atmosphere in chronological order from the Earth's surface upwards.
I. Troposphere
II. Stratosphere
III. Mesosphere
IV. Thermosphere
(A) I, II, III, IV
(B) II, I, IV, III
(C) I, III, II, IV
(D) IV, III, II, I

26. The term 'Hydrosere' in community dynamics refers to:
(A) Ecological succession that begins in an aquatic environment.
(B) Ecological succession that begins in a dry habitat.
(C) The total water on a planet's surface, such as lakes and seas.
(D) The final, stable stage of an ecological succession.

27. Which of the following is NOT classified as an occupational hazard?
(A) Chemical exposure in a laboratory.
(B) Repetitive strain from assembly line work.
(C) Excessive noise in a manufacturing plant.
(D) A congenital health condition of an employee.

28. The concept of 'Ecological Balance' refers to:
(A) The equal number of producers and consumers in an ecosystem.
(B) A state of dynamic equilibrium within a community of organisms.
(C) The complete absence of predators in an ecosystem.
(D) The flow of energy in a single, unchanging

Click Here to Buy book on Amazon

waste disposal, and controlling vectors. While these actions focus on physical infrastructure and community education, the implementation of financial incentives for hygiene practices is not typically a standard component of these environmental health frameworks.

265. (A) To prevent these locations from becoming centers of disease transmission.
Institutions such as healthcare facilities and temporary shelters often house high concentrations of vulnerable people. Specific planning guidelines for these environments are necessary to ensure they do not facilitate the spread of infectious diseases. Robust sanitation and hygiene standards within these settings protect patients and the displaced, preventing facilities from becoming centers for further transmission.

266. (B) The interplay between an agent, a host, and the environment.
The epidemiological triad is a fundamental conceptual model used to analyze disease patterns. It examines the complex interactions between the infectious agent, the susceptible human host, and the surrounding environment. Understanding how these three factors influence each other in a post-disaster setting allows epidemiologists to identify the causes of outbreaks and develop effective control strategies.

267. (B) The difficulty in accessing affected populations.
Conducting epidemiological research during a disaster is often hindered by physical and logistical barriers. Reaching affected populations in chaotic or damaged environments can be extremely difficult for investigators. This limited access, combined with the challenges of ensuring data quality in unstable conditions, represents a significant hurdle for those trying to accurately assess the health impacts.

268. (A) To systematically collect data on the disaster's impact.
A Post Disaster Needs Assessment serves as a structured tool for evaluating the full extent of a disaster's impact. It is used to systematically collect essential data on health needs, infrastructure damage, and economic losses. This comprehensive information is vital for informing immediate response efforts and guiding the long-term recovery and reconstruction process for the health sector.

269. (C) Rapidly assessing health needs and identifying risk factors.
Epidemiology plays a multi-faceted role in disaster management by providing the evidence base for health interventions. Key activities include the rapid assessment of an affected population's immediate health needs and the systematic identification of specific risk factors. Additionally, continuous surveillance of health outcomes helps monitor trends and detect potential disease outbreaks early in the response phase.

270. (D) To enable long-term tracking of individuals affected by a disaster.
A disaster registry is an important tool for monitoring the health consequences of a catastrophic event over time. It allows for the long-term tracking of individuals who were exposed to specific hazards or affected by the disaster. This longitudinal data is crucial for understanding delayed health effects and providing ongoing support and care to vulnerable survivor populations.

271. (C) A number of disease cases exceeding normal expectancy.
In public health, an outbreak is defined by the number of disease cases appearing in a specific population or area. It occurs when the frequency of these cases significantly exceeds what is normally expected for that time and place. Confirming this existence is the first step in a structured investigation, helping to trigger an appropriate response.

272. (B) They serve as early warning signals that initiate an investigation.
Trigger alerts are essential components of a proactive public health surveillance system. They act as early warning signals that indicate a potential health threat or a significant change in disease patterns. Once these alerts are identified, they prompt health authorities to initiate a formal investigation, ensuring that outbreaks are detected and addressed at the earliest possible stage.

NODIA

39. Match List I with List II concerning types of pollution and their primary sources.
List I:
P. Marine Pollution
Q. Noise Pollution
R. Thermal Pollution
S. Soil Pollution
List II:
1. Industrial machinery and traffic
2. Industrial coolants and power plants
3. Oil spills and plastic debris
4. Agricultural pesticides and herbicides
(A) P-1, Q-2, R-4, S-3
(B) P-3, Q-1, R-2, S-4
(C) P-4, Q-3, R-1, S-2
(D) P-2, Q-4, R-3, S-1

40. Heat waves and cold waves are examples of:
(A) Extreme weather events.
(B) Long-term climate change trends.
(C) Geological hazards.
(D) Biogeochemical cycles.

41. What is the primary function of a safety committee in a workplace?
(A) To discipline employees who violate safety rules.
(B) To exclusively manage financial compensation for accidents.
(C) To promote and maintain the health and safety of workers.
(D) To conduct scientific research on new safety technologies.

42. Forest fires and wild fires are primarily a safety concern related to:
(A) Natural and semi-natural landscapes.
(B) Industrial operations.
(C) Marine environments.
(D) Urban infrastructure.

43. Which of the following is an example of an 'ecosystem service' used in EcoDRR?
(A) Building a concrete dam.
(B) Installing a seismic early-warning system.
(C) Manufacturing fire-resistant building materials.
(D) Mangrove forests protecting coastlines from storm surges.

44. Consider the following statements:
Statement I : The Earth's heat budget refers to the perfect balance between incoming solar radiation and outgoing terrestrial radiation.
Statement II : A surplus of incoming energy compared to outgoing energy would lead to global cooling.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

45. Consider the following statements about Environmental Health and Disasters:
I. Acid rain is primarily caused by emissions of sulfur dioxide and nitrogen oxides.
II. Global warming is a phenomenon separate from the broader concept of climate change.
III. Ozone layer depletion is most significant over equatorial regions.
IV. Heat related illnesses can be a direct consequence of prolonged heat waves.
V. Frost and fog are atmospheric phenomena that can pose risks to health and safety.
Which of the above statements are correct?
(A) I, II and III only
(B) II, III and V only
(C) I, IV and V only
(D) I, III, IV and V only

46. 'Xerosere' refers to an ecological succession that starts in:
(A) An aquatic environment.
(B) A saline environment.
(C) A forested environment.
(D) A very dry environment.

47. The concept of 'population dynamics' would study all of the following EXCEPT:
(A) The chemical composition of individuals.
(B) Birth rates and death rates.
(C) Immigration and emigration.
(D) The age structure of a population.

48. The primary role of PEDRR (Partnership for Environment and DRR) is to:
(A) Fund disaster relief operations exclusively.
(B) Advocate for and implement ecosystem-based solutions for disaster risk reduction.
(C) Regulate industrial emissions on a global scale.

Downloaded from www.pdf.tube

69. Acid rain is a major environmental problem that directly affects:
(A) The ozone layer in the stratosphere.
(B) The Earth's magnetic field.
(C) The pH level of soil and water bodies.
(D) The speed of ocean currents.

70. Consider the following statements about Occupational Health and Safety:
I. Occupational hazards are classified into categories such as physical, chemical, and biological.
II. Ergonomics is primarily concerned with providing personal protective equipment.
III. 'Notifiable occupational diseases' are illnesses that must be legally reported to authorities.
IV. Industrial toxicology studies the systemic, chronic, and cumulative effects of workplace chemicals.
V. Agricultural respiratory hazards are not considered a significant occupational health issue.
Which of the above statements are correct?
(A) I, II and IV only
(B) I, III and IV only
(C) II, III and V only
(D) I, III, IV and V only

71. A 'systemic effect' in industrial toxicology refers to an adverse effect that:
(A) Adverse effects occurring only at the specific point of chemical contact.
(B) Symptoms that appear immediately following a single high-dose exposure.
(C) Conditions caused by biological agents rather than chemical substances.
(D) Adverse effects on organ systems distant from the toxicant's entry point.

72. In the context of disaster management, what does vulnerability assessment aim to do?
(A) Identify the weaknesses and susceptibilities of a community or system to a hazard.
(B) Predict the exact time a disaster will occur.
(C) Calculate the total economic loss after a disaster.
(D) Allocate relief funds to affected populations.

73. Which of the following is an example of a 'corporate and office hazard'?
(A) Exposure to toxic fumes in a chemical plant.
(B) Risk of falls from height on a construction site.
(C) Poor indoor air quality and ergonomic issues.
(D) Drowning risk in the fishing industry.

74. 'Safety sampling' is a technique used to:
(A) Quantify the number of safety defects or unsafe behaviours in a specific area at a specific time.
(B) Measure the concentration of a chemical in the air.
(C) Test the strength of a building material.
(D) Interview a random sample of workers about their job satisfaction.

75. Arrange the typical steps of an overall accident investigation process in a logical chronological sequence.
I. Gather evidence (People, Parts, Position, Paper)
II. Immediate response and securing the scene
III. Analyze data and determine root causes
IV. Write the accident report and recommend corrective actions
(A) I, II, III, IV
(B) II, I, III, IV
(C) II, III, I, IV
(D) I, III, II, IV

76. The concept of biodiversity encompasses all of the following levels EXCEPT:
(A) Genetic diversity
(B) Geological diversity
(C) Species diversity
(D) Ecosystem diversity

77. An 'investigators kit' for an accident scene typically contains:
(A) Only first aid supplies.
(B) Only legal documents and forms.
(C) Tools for documentation, measurement, and evidence collection.
(D) Heavy machinery for clearing debris.

78. The primary cause of ozone layer depletion is:
(A) Carbon dioxide emissions from burning fossil fuels.
(B) Methane released from agricultural activities.

NODIA

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

59. The 'cost of an accident' includes:
(A) Only the direct costs like medical expenses and compensation.
(B) Only the indirect costs like lost production and damage to morale.
(C) Only the cost of repairing damaged equipment.
(D) Both direct costs and indirect/hidden costs.

60. 'Fire following earthquakes' is an example of a:
(A) Primary disaster.
(B) Secondary or cascading disaster.
(C) Technological hazard.
(D) Meteorological disaster.

61. Which term describes a substance's ability to cause cancer?
(A) Systemic effect
(B) Chronic effect
(C) Carcinogenicity
(D) Cumulative effect

62. The 'general atmospheric circulation' refers to:
(A) The daily weather patterns in a local area.
(B) The formation of clouds and precipitation.
(C) The cycle of seasons throughout the year.
(D) The large-scale movement of air across the globe.

63. The use of 'traditional environmental wisdom' in disaster management is an example of:
(A) A community-based, eco-based approach.
(B) A high-tech, engineered solution.
(C) A purely legislative measure.
(D) A post-disaster financial instrument.

64. Match List I with List II concerning occupational health concepts.
List I:
P. Work Related Musculoskeletal Disorder (WMSD)
Q. Industrial Toxicology
R. Carcinogen
S. Ergonomics

List II:
1. Study of adverse effects of workplace chemicals
2. Science of fitting the job to the worker
3. An injury from repetitive motion or poor posture
4. A cancer-causing agent

(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-2, S-1
(C) P-3, Q-1, R-4, S-2
(D) P-2, Q-4, R-1, S-3

65. Which of the following is NOT a fundamental component of an ecosystem's structure?
(A) Abiotic materials (water, minerals)
(B) Market price of ecosystem goods
(C) Producers (plants)
(D) Consumers (animals)

66. The primary difference between a 'safety survey' and a 'safety inspection' is that:
(A) A survey is broader and assesses the overall safety culture, while an inspection is focused on specific compliance issues.
(B) An inspection is done by external auditors, while a survey is done by internal staff.
(C) A survey only looks at documentation, while an inspection only looks at physical conditions.
(D) There is no difference; the terms are used interchangeably.

67. What are the 'four types of evidences' typically gathered in an accident investigation?
(A) Hearsay, Rumor, Opinion, and Fact.
(B) Primary, Secondary, Tertiary, and Quaternary.
(C) People, Parts, Position, and Paper.
(D) Motive, Opportunity, Method, and Witness.

68. The concept of 'Nature Based Solutions (NBSs)' for disaster management emphasizes:
(A) Replacing all existing natural features with high-tech engineered structures.
(B) Focusing exclusively on technological interventions for rapid disaster response.
(C) Ignoring all environmental factors during the initial disaster planning phase.
(D) Using properties of natural ecosystems to address societal challenges like disaster risk.

Click Here to Buy book on Amazon

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

109. The functional units and activities of occupational health services typically include:
(A) Providing basic emergency treatment and initial first aid for workplace injuries.
(B) Developing sales, marketing, and public relations strategies for the company.
(C) Surveillance of the work environment and workers' health, and providing advice.
(D) Managing payroll, employee benefits, and human resource management tasks.

110. A 'cumulative effect' of a toxin is one that:
(A) Disappears as soon as exposure stops.
(B) Occurs after a single, massive dose.
(C) Affects only the skin.
(D) Results from the build-up of the substance in the body over multiple exposures.

111. The difference between a 'reportable' and a 'non-reportable' accident is determined by:
(A) Pre-defined criteria set by legal or organizational standards.
(B) The personal opinion of the supervisor.
(C) The time of day the accident occurred.
(D) The cost of the equipment damaged.

112. One of the 'principles of accident prevention' is:
(A) Accidents are random events that cannot be controlled.
(B) Management has a responsibility for safety.
(C) The employee is always solely at fault.
(D) Safety procedures are suggestions, not requirements.

113. Which of the following is a direct effect of climate variability on population health?
(A) Improved crop yields due to stable weather.
(B) Increased incidence of heat-related illnesses during a heatwave.
(C) A decrease in vector-borne diseases.
(D) A reduction in air pollution.

114. Match List I with List II.
List I:
P. Heat wave
Q. Frost
R. Fog
S. Hailstorm
List II:
1. A cloud of tiny water droplets suspended at or near the Earth's surface
2. Ice crystals forming on surfaces when the temperature drops below freezing
3. A prolonged period of excessively hot weather
4. Precipitation in the form of balls or irregular lumps of ice
(A) P-3, Q-2, R-1, S-4
(B) P-1, Q-4, R-2, S-3
(C) P-3, Q-1, R-4, S-2
(D) P-2, Q-3, R-1, S-4

115. The role of a 'records of accidents' document is primarily to:
(A) Be used in marketing materials to show company transparency.
(B) Serve as a training manual for new employees.
(C) Provide a legal and historical account for analysis and prevention efforts.
(D) Publicly shame the employees involved in the accident.

NODIA

116. In an ecosystem, which group of organisms is responsible for converting inorganic compounds into organic compounds?
(A) Decomposers
(B) Primary consumers
(C) Secondary consumers
(D) Producers

117. The occupational safety scenario in India is characterized by:
(A) A complete absence of national legislation regarding occupational safety.
(B) A focus only on the mining industry while excluding all other sectors.
(C) A robust framework of laws and regulations with implementation challenges.
(D) A regulatory system managed entirely by international governing bodies.

118. Which statement is correct regarding the distribution of temperature on Earth?
(A) Temperature is uniformly distributed across

(C) Sulfur dioxide from industrial processes.
(D) Release of chlorofluorocarbons (CFCs) into the atmosphere.

79. Consider the following statements:
Statement I : Cardio Pulmonary Resuscitation (CPR) is a first-aid technique for occupational health emergencies.
Statement II : Eye tests and vital function tests are part of routine occupational health screening.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

80. Consider the following statements about Accident Investigation and Reporting:
I. An unsafe condition refers to a hazardous physical state in the workplace.
II. Incident Recall Technique (IRT) is a method for gathering information from people.
III. A 'reportable accident' is defined by legal and regulatory requirements.
IV. The primary goal of accident investigation is to assign blame to an individual.
Which of the above statements are correct?
(A) I and III only
(B) II and IV only
(C) I, II and III only
(D) I, III and IV only

81. Which layer of the atmosphere contains the majority of weather phenomena?
(A) Stratosphere
(B) Troposphere
(C) Mesosphere
(D) Thermosphere

82. The 'cost of pollution management' includes which of the following?
(A) Costs of prevention, control, and remediation of pollution.
(B) Only the fines paid by polluting industries.
(C) Only the cost of installing pollution control equipment.
(D) The increase in property values in non-polluted areas.

83. **Assertion (A) :** Energy transfer between trophic levels is inefficient.
Reason (R) : According to the Second Law of Thermodynamics, every energy transformation results in some energy being lost as heat.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

84. What does the term 'death antagonism' signify in population dynamics?
(A) The cooperative behaviour that increases survival rates.
(B) A complete absence of death in a theoretical population.
(C) The reproductive rate of a population.
(D) The factors and interactions that contribute to the mortality rate of a population.

NODIA

85. Which of the following is considered a 'Nature Based Solution' for managing urban heat?
(A) Installing more air conditioning units.
(B) Painting roofs with reflective white paint.
(C) Increasing green spaces and tree cover.
(D) Building taller skyscrapers to create shade.

86. A disease that develops slowly over a long period of exposure to a workplace hazard is known as a:
(A) Acute effect
(B) Chronic effect
(C) Local effect
(D) Temporary effect

87. The purpose of a 'planning matrix' in accident investigation is to:
(A) Calculate the financial cost of the accident.
(B) Determine the legal liability of the company.
(C) Create a timeline of events for the media.
(D) Organize the investigation plan and assign tasks.

88. 'Terminal heat' is a specific term often used in which context?
(A) A critical period of high temperature stress during crop growth.
(B) The final stage of a fire.
(C) The heat generated by a computer terminal.

(D) The heat at the Earth's core.

89. Match List I with List II.
List I:
P. EcoDRR
Q. Nature Based Solutions (NBSs)
R. Strategic Environmental Assessment (SEA)
S. PEDRR
List II:
1. A multi-stakeholder platform promoting environmental tools for DRR
2. Integration of environmental issues into policies and plans
3. Using ecosystem services specifically to reduce disaster risk
4. Using nature to solve societal challenges, including disaster risk
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-2, S-1
(C) P-4, Q-1, R-2, S-3
(D) P-2, Q-3, R-4, S-1

90. What is the defining feature of a biogeochemical cycle?
(A) It involves the movement of chemical elements through both biotic and abiotic parts of an ecosystem.
(B) It involves only living organisms.
(C) It describes the one-way flow of energy.
(D) It occurs only in aquatic ecosystems.

91. Which of the following best describes an effect of 'global warming'?
(A) Depletion of the stratospheric ozone layer.
(B) The immediate cooling of the Earth's surface.
(C) A decrease in sea levels worldwide.
(D) Increase in the average temperature of the Earth's climate system.

92. The 'hydrological cycle' is driven primarily by energy from:
(A) The Earth's core.
(B) The Sun.
(C) Tides.
(D) Geothermal vents.

93. A 'local effect' in industrial toxicology occurs:
(A) Throughout the entire body.
(B) In a different part of the body from the entry point.
(C) At the site of first contact with the toxic substance.
(D) Only after many years of exposure.

94. Which of the following is NOT a component of the 'investigator's kit' used in a typical accident investigation process?
(A) Camera and measuring tape.
(B) Sample containers and labels.
(C) Personal protective equipment.
(D) Employee disciplinary action forms.

95. Consider the following statements related to Fire Disaster Safety:
I. Forest fires and wild fires are exclusively caused by human activity.
II. 'Fire following earthquakes' is considered a primary, not a secondary, disaster.
III. Vulnerability assessment for fire disasters involves identifying susceptible populations and infrastructure.
IV. Risk assessment combines the probability of a fire with the potential consequences.
V. Mitigation for fire disasters can include creating fire breaks and using fire-resistant building materials.
Which of the above statements are correct?
(A) I, II and III only
(B) II, III and V only
(C) I, IV and V only
(D) III, IV and V only

96. Which human activity is a major contributor to Ganga and Yamuna pollution?
(A) Deforestation in the Himalayas.
(B) Discharge of untreated domestic sewage and industrial effluents.
(C) Over-fishing by local communities.
(D) Construction of hydroelectric dams.

97. The concept that different species cannot indefinitely occupy the same ecological niche in the same habitat is known as:
(A) The law of thermodynamics.
(B) The competitive exclusion principle.
(C) The theory of succession.
(D) The principle of ecological balance.

98. The main structural components of a population are:
(A) Age distribution, density, and dispersion.

Downloaded from www.pdf.tube

(B) Energy flow and nutrient cycling.
(C) Habitat and niche.
(D) Trophic levels and food chains.

99. In the context of fire safety, 'preparedness' involves actions taken:
(A) During a fire to suppress it.
(B) After a fire to recover from it.
(C) Before a fire to ensure an effective response.
(D) To investigate the cause of the fire.

100. The concept and spectrum of occupational health is best described as:
(A) The provision of medical services focusing solely on treating work-related physical injuries.
(B) A comprehensive system for providing health insurance to employees across various sectors.
(C) A legal framework for compensating injured workers according to national labor standards.
(D) The promotion and maintenance of physical, mental, and social well-being of workers.

101. Which term describes the entry of carcinogens into human systems?
(A) Metabolism
(B) Excretion
(C) Absorption
(D) Synergism

102. An example of an agricultural respiratory hazard is:
(A) Musculoskeletal injury from lifting heavy bags.
(B) Exposure to farmer's lung disease from moldy hay.
(C) Skin irritation from pesticides.
(D) Hearing loss from tractor noise.

103. 'Unsafe condition' in accident causation refers to:
(A) A worker's lack of training.
(B) A deliberate violation of a safety rule.
(C) A worker's state of fatigue.
(D) A physical or environmental hazard in the workplace, such as a slippery floor.

104. Consider the following statements:
Statement I : The Koppen climate classification system uses letters to denote different climate zones.
Statement II : The Thornthwaite scheme is more complex and considers potential evapotranspiration.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

105. Consider the following regarding the structure and composition of the atmosphere:
I. The atmosphere is composed primarily of oxygen, followed by nitrogen.
II. The stratosphere contains the ozone layer, which absorbs UV radiation.
III. Atmospheric pressure increases with altitude.
IV. The troposphere is the layer closest to the Earth's surface.
Which of the above statements are correct?
(A) I and III only
(B) II and IV only
(C) I, II and IV only
(D) II, III and IV only

106. What is the primary purpose of occupational health screening?
(A) To detect potential health problems at an early stage.
(B) To determine an employee's suitability for promotion.
(C) To set insurance premium rates.
(D) To gather data for marketing purposes.

NODIA

107. Which of the following is a key tool for implementing EcoDRR?
(A) Construction of nuclear power plants.
(B) Stock market speculation.
(C) Urban highway expansion.
(D) Integrated ecosystem management.

108. **Assertion (A) :** Work Related Musculoskeletal Disorders (WMSDs) are a major occupational health concern.
Reason (R) : Poorly designed workstations and repetitive tasks, which are addressed by ergonomics, are significant risk factors for WMSDs.

(D) Conduct research on plate tectonics.

49. What is a 'notifiable occupational disease'?
(A) Any illness an employee experiences during their employment.
(B) A disease caused by occupational exposure that must be reported to relevant authorities by law.
(C) A disease for which an official diagnosis does not need to be reported to authorities.
(D) A disease that is highly contagious but not work-related.

50. Industrial toxicology is the study of:
(A) The adverse effects of chemicals encountered in the workplace on living organisms.
(B) The beneficial effects of chemicals on industrial processes.
(C) The methods for synthesizing industrial chemicals.
(D) The economic impact of chemical manufacturing.

51. The phenomenon where pollutants become more concentrated in the tissues of organisms at successively higher levels in a food chain is known as:
(A) Biodegradation
(B) Biogeochemical cycling
(C) Biomagnification
(D) Bioaccumulation

52. What does 'Ergonomics' primarily focus on in the workplace?
(A) Development of chemical safety and handling procedures for hazardous materials.
(B) The implementation of fire prevention and suppression systems within the facility.
(C) The establishment of financial incentives for safe behavior among staff members.
(D) The design of work environments to fit the capabilities and limitations of employees.

53. An industrial disaster is classified based on factors such as:
(A) The time of day it occurs.
(B) The number of news articles written about it.
(C) The cause, magnitude of impact, and area of effect.
(D) The seniority of the managers involved.

54. In the context of accident investigation, what does 'JSA' stand for?
(A) Job Survey Assessment
(B) Job Safety Analysis
(C) Joint Safety Accord
(D) Judicial System Audit

55. Consider the following statements about Climate Resilience:
I. Climate resilience is the capacity to cope with a hazardous climate event.
II. A key indicator of resilience is the speed of recovery after a disturbance.
III. The hydrological cycle is a crucial element in understanding climate systems.
IV. Thornthwaite's climate classification scheme is based solely on wind patterns.
Which of the above statements are correct?
(A) I and IV only
(B) II and III only
(C) I, II and III only
(D) II, III and IV only

56. The main objective of a 'Safety Audit' is to:
(A) Providing a structured examination of the workplace safety management system.
(B) Identifying and punishing employees who participate in unsafe workplace acts.
(C) Calculating the total financial cost associated with previous accident events.
(D) Fulfilling a basic requirement for obtaining corporate insurance policies.

57. According to accident causation models, accidents are often the result of:
(A) A single, isolated, and unforeseeable event.
(B) The inherent fault of the injured employee alone.
(C) A chain of events involving both unsafe acts and unsafe conditions.
(D) Purely random chance with no identifiable cause.

58. **Assertion (A) :** Strategic Environmental Assessment (SEA) is linked with EcoDRR.
Reason (R) : SEA helps in integrating environmental considerations, including disaster risk, into policies, plans, and programs at the earliest stages of decision-making.

Click Here to Buy book on Amazon

all latitudes.
(B) Temperature generally decreases from the equator towards the poles.
(C) The southern hemisphere is always colder than the northern hemisphere.
(D) Altitude has no effect on local temperature.

119. A 'safety inspection' primarily focuses on identifying:
(A) Employee satisfaction levels.
(B) Production bottlenecks.
(C) The company's profit margin.
(D) Specific hazards and non-compliance with safety standards.

120. Consider the following statements about accident causation and prevention:
I. An 'unsafe act' is a departure from a standard safety procedure by a person.
II. Accident causation models suggest that single causes are usually responsible for incidents.
III. The 'cost of an accident' includes both direct and indirect costs.
IV. The role of a safety committee is purely advisory with no real function.
V. 'Job Safety Analysis' is a reactive tool used only after an accident occurs.
Which of the above statements are correct?
(A) I and III only
(B) II, IV and V only
(C) I, II and III only
(D) I, III and V only

121. The term 'biodiversity conservation' refers to:
(A) The study of ancient life through fossils.
(B) The process of species evolving over time.
(C) The protection, preservation, management, or restoration of wildlife and natural resources.
(D) The commercial exploitation of all natural resources.

122. Which of the following is NOT a type of industrial disaster classification?
(A) Natural-triggered technological (Na-tech)
(B) Process-related
(C) Human-error related
(D) Profit-margin related

NODIA

123. The final report of an accident investigation should primarily aim to:
(A) Identifying specific individuals for legal prosecution within the judicial system.
(B) Developing strategies to minimize the financial payout for the company involved.
(C) Satisfying media and public inquiries with minimal information regarding the event.
(D) Describing the event, determining causes, and recommending corrective actions for prevention.

124. What is the most significant cause of environmental pollution as a whole?
(A) Natural geological processes.
(B) Anthropogenic (human) activities.
(C) Extraterrestrial impacts.
(D) Volcanic eruptions.

125. Arrange the following events in the likely chronological sequence of an industrial toxicology process.
I. Absorption of the toxicant into the body
II. Systemic distribution via the bloodstream
III. Exposure to the toxic substance in the workplace
IV. Manifestation of a chronic health effect
(A) I, II, III, IV
(B) III, I, II, IV
(C) III, II, I, IV
(D) II, I, IV, III

126. A key feature of the Second Law of Thermodynamics relevant to ecosystems is that:
(A) The total amount of energy in the universe is constant.
(B) Energy can be recycled indefinitely within a closed system.
(C) All living organisms can create their own energy.
(D) As energy is transferred, it tends to become less organized and more diffuse.

127. Which of the following is a primary function of an investigator in an accident investigation?
(A) To collect and analyze evidence impartially to determine facts and causes.
(B) To provide immediate medical care to the injured.
(C) To act as the company's legal representative.
(D) To issue disciplinary warnings to uninvolved

employees.

128. Atmospheric pressure is caused by:
(A) The rotation of the Earth.
(B) The weight of the air above a given point.
(C) The magnetic field of the Earth.
(D) Solar radiation.

129. Consider the following statements:
Statement I : The primary purpose of a 'safety survey' is to check compliance with a specific checklist of items.
Statement II : A 'safety audit' is a more comprehensive and systematic review of the entire safety management system.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is false but Statement II is true.
(D) Statement I is true but Statement II is false.

130. Consider the following statements about Eco-based and Nature Based Disaster Management:
I. EcoDRR utilizes ecosystem services for disaster risk reduction.
II. Traditional environmental wisdom is considered an outdated and irrelevant approach.
III. Natural resource management is a key component of an integrated ecosystem management approach.
IV. Nature Based Solutions (NBSs) are always less effective than hard engineering solutions.
Which of the above statements are correct?
(A) I and III only
(B) II and IV only
(C) I, II and III only
(D) I, III and IV only

131. A 'food chain' illustrates:
(A) The total biomass of an ecosystem.
(B) The interaction between all species in a habitat.
(C) The pathway of energy transfer from one organism to another.
(D) The process of decomposition.

132. The process of ecological succession in a barren, rocky area is an example of:
(A) Hydrosere
(B) Secondary succession
(C) Climax community
(D) Xerosere

133. **Assertion (A) :** In India, certain occupational diseases are 'notifiable'.
Reason (R) : The mandatory reporting of these diseases helps authorities to monitor workplace health trends, investigate conditions, and implement preventive measures.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

134. Which of these is a recognized classification of occupational hazards?
(A) Financial hazards
(B) Ergonomic hazards
(C) Administrative hazards
(D) Chronological hazards

135. The 'response' phase of the overall accident investigation process involves:
(A) Writing the final report.
(B) Implementing long-term corrective actions.
(C) Analyzing the evidence.
(D) Securing the scene and providing emergency aid.

136. The accident reporting requirement in India is primarily dictated by:
(A) National laws and regulations, such as the Factories Act.
(B) International treaties.
(C) Corporate policies.
(D) Media pressure.

137. Which of the following would be part of a fire disaster 'response' plan?
(A) Creating a fire break in a forest.
(B) Conducting a post-fire vulnerability assessment.
(C) Evacuation procedures and firefighting operations.
(D) Implementing stricter building codes.

138. The primary difference between renewable and non-renewable resources is:

Downloaded from www.pdf.tube

(A) The rate at which the resource can be replenished compared to the rate of consumption.
(B) The physical state of the resource.
(C) The geographical location of the resource.
(D) The cost of extraction.

139. Match List I with List II.
List I:
P. Unsafe Act
Q. Unsafe Condition
R. Job Safety Analysis (JSA)
S. Safety Audit
List II:
1. A systematic evaluation of a complete safety program
2. A hazardous feature of the work environment
3. A proactive method to identify hazards before a job is done
4. A behavioural departure from a safe procedure
(A) P-1, Q-3, R-2, S-4
(B) P-4, Q-2, R-3, S-1
(C) P-4, Q-3, R-1, S-2
(D) P-2, Q-4, R-3, S-1

140. A 'pyramid of numbers' can be inverted in which of the following scenarios?
(A) A grassland ecosystem with many grass plants and fewer herbivores.
(B) A single large tree supporting thousands of insects.
(C) An ocean ecosystem with phytoplankton and zooplankton.
(D) A pond ecosystem with algae and small fish.

141. The concept of 'climate resilience' implies the ability to:
(A) Prevent any climate-related event from occurring.
(B) Reverse the process of climate change completely.
(C) Absorb the impacts of and recover from climate-related events.
(D) Ignore climate variability in planning.

142. The main goal of Strategic Environmental Assessment (SEA) is to:
(A) Assess the environmental impact of a single, specific project.
(B) Integrate environmental considerations into strategic decision-making like policies and plans.
(C) Punish countries for not meeting environmental targets.
(D) Market environmentally friendly products.

143. A vital function test in occupational health screening might measure:
(A) Blood pressure and pulse rate.
(B) Hearing acuity.
(C) Visual field.
(D) Muscular strength.

144. Which of the following is an example of an ecosystem-based approach to disaster risk reduction?
(A) Constructing a large concrete seawall.
(B) Restoring a coastal mangrove forest to buffer against storm surges.
(C) Developing a satellite-based early warning system.
(D) Manufacturing stronger steel for buildings.

NODIA

145. Consider the following statements about Climate and Atmosphere:
I. The classification of world climates by Koppen is based on observed temperature and precipitation patterns.
II. The Earth's heat budget is the balance between incoming and outgoing radiation.
III. The general atmospheric circulation is primarily driven by unequal solar heating of the Earth.
IV. Atmospheric pressure and motion are unrelated to temperature distribution.
V. The hydrological cycle describes the circulation of water but is not linked to climate.
Which of the above statements are correct?
(A) I, II and V only
(B) I, II and III only
(C) II, III, and IV only
(D) I, IV and V only

146. A 'temporary effect' in industrial toxicology is an adverse effect that:
(A) Diminishes after the exposure to the substance ceases.
(B) Lasts for the entire lifetime of the individual.
(C) Affects the genetic material of the cells.

206. In industrial toxicology, a 'systemic' effect is one that:
(A) Is confined to the point of entry.
(B) Is caused by the workplace system, not a chemical.
(C) Is always temporary and reversible.
(D) Affects one or more organs distant from the point of entry.

207. A 'safety committee' is most effective when it:
(A) Involves both management and worker representatives to collaboratively address safety issues.
(B) Is composed solely of senior management.
(C) Meets once every five years.
(D) Focuses only on punishing rule-breakers.

208. **Assertion (A) :** The investigation of 'near misses' or 'close calls' is an important part of a proactive safety program.
Reason (R) : Analyzing events where an accident could have occurred but didn't can reveal unsafe conditions and acts that need to be corrected before they cause an actual injury.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

209. The 'global concern' for the environment stems from the recognition that:
(A) Environmental problems are localized and easily contained.
(B) Environmental issues like climate change and biodiversity loss have planet-wide consequences.
(C) Economic growth is independent of environmental health.
(D) Technology can solve any environmental problem without the need for policy changes.

210. Which of the following is an example of an 'ergonomic' hazard in an office setting?
(A) A poorly adjusted chair leading to back pain.
(B) A fire.
(C) A chemical spill.
(D) A power outage.

211. Which of the following is NOT a primary source of water pollution?
(A) Industrial effluent
(B) Agricultural runoff
(C) Stratospheric ozone
(D) Untreated sewage

212. A primary goal of a 'vulnerability assessment' for a wild fire is to identify:
(A) The exact date the next fire will occur.
(B) The total number of trees in the forest.
(C) The amount of rainfall received last year.
(D) Communities and assets that are most at risk and why.

213. A 'reportable accident' is defined by:
(A) The personal judgment of the shift supervisor.
(B) The amount of media attention it receives.
(C) The severity of injury or duration of absence from work as stipulated by law.
(D) Whether or not the employee decides to sue the company.

214. Match List I with List II.
List I:
P. Ecological Pyramid
Q. Food Web
R. Biogeochemical Cycle
S. Ecological Succession
List II:
1. Interconnected feeding relationships
2. Change in community composition over time
3. Graphical representation of trophic levels
4. Movement of elements like carbon or nitrogen
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-1, R-4, S-2
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-4, R-1, S-3

215. The concept of 'atmospheric motion' is fundamentally about:
(A) The chemical reactions occurring in the stratosphere.
(B) The water cycle.
(C) The Earth's rotation on its axis.
(D) The movement of air, which we experience as wind.

Click Here to Buy book on Amazon

(D) Report the disaster to the media.

157. Which one of the following is a key element of the structure of the atmosphere?
(A) The percentage of water vapor, which is constant everywhere.
(B) The uniform density of air from sea level to space.
(C) The distinct layers defined by temperature changes.
(D) The absence of any trace gases.

158. **Assertion (A) :** The use of ecosystems for disaster risk reduction (EcoDRR) is gaining prominence.
Reason (R) : Natural habitats like wetlands and forests can provide cost-effective, self-maintaining protection against certain natural hazards.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

159. In the context of occupational health, 'carcinogens' are substances that can enter the human system primarily through:
(A) Inhalation, ingestion, and skin absorption.
(B) Telepathy and psychic means.
(C) Only through open wounds.
(D) Only through consumption of contaminated food.

160. What distinguishes a wild fire from a controlled burn?
(A) Wild fires are always larger.
(B) Wild fires are unplanned and uncontrolled, whereas controlled burns are intentional.
(C) Wild fires only occur in specific types of forests.
(D) There is no distinction; the terms are synonymous.

161. The 'mitigation' phase of disaster management for forest fires would involve:
(A) Rebuilding homes destroyed by a fire.
(B) Creating fuel breaks and managing vegetation to reduce fire risk.
(C) Deploying firefighters to an active blaze.
(D) Rescuing wildlife after a fire has passed.

162. An ecosystem's 'function' refers to its:
(A) Energy flow and nutrient cycling processes.
(B) Physical structure and list of species.
(C) Geographical location and climate.
(D) Total weight of living organisms.

163. A key principle of an 'eco-based approach' to disaster management is:
(A) The reliance on heavy, man-made infrastructure.
(B) The exclusion of local communities from planning.
(C) The understanding that healthy ecosystems can enhance community resilience.
(D) The belief that technology alone can solve all disaster-related problems.

164. Match List I with List II.
List I:
P. Physical Hazard
Q. Chemical Hazard
R. Ergonomic Hazard
S. Biological Hazard
List II:
1. Exposure to a virus in a healthcare setting
2. Poorly designed workstation causing back pain
3. Excessive noise from machinery
4. Inhalation of toxic solvent fumes
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-2, S-1
(C) P-4, Q-1, R-2, S-3
(D) P-2, Q-3, R-4, S-1

165. The functional aspect of a population would include:
(A) The spatial pattern of individuals.
(B) The number of individuals per unit area.
(C) The population's growth rate and mortality rate.
(D) The ratio of males to females.

166. A 'heat related illness' is a direct health effect of which environmental factor?
(A) Extreme cold
(B) High ambient temperature and humidity
(C) High atmospheric pressure
(D) Low levels of solar radiation

Downloaded from www.pdf.tube

(A) Understanding the nature of the event for better prevention and response planning.
(B) Determining the salary of the CEO.
(C) Marketing the company's products.
(D) Deciding the color of safety helmets.

227. The role of natural resource management in EcoDRR is to:
(A) Exploit natural resources as quickly as possible for economic gain.
(B) Prevent any human use of natural resources.
(C) Ensure the sustainable use and health of ecosystems so they can provide disaster reduction services.
(D) Convert all natural areas into industrial zones.

228. Which component is NOT typically part of the structure of occupational health services?
(A) Functional units for monitoring.
(B) A system for health screening.
(C) A framework for providing first aid and emergency care.
(D) A department for product sales.

229. Consider the following statements:
Statement I : The cost of an accident includes hidden costs like damage to company reputation and employee morale.
Statement II : The principles of accident prevention suggest that all accidents are preventable.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

230. Consider the following statements related to energy in ecosystems:
I. The sun is the ultimate source of energy for most ecosystems.
II. Energy flow is cyclical, returning to the producers after consumption.
III. The laws of thermodynamics govern the transfer of energy.
IV. A food web represents a single pathway of energy flow.
Which of the above statements are correct?
(A) I and III only
(B) II and IV only
(C) I, II and III only
(D) I, III and IV only

231. The primary function of a safety audit is to:
(A) Conduct a one-time check for hazards.
(B) Train new employees on safety procedures.
(C) Calculate the financial losses from past accidents.
(D) Systematically review the entire safety management system's effectiveness.

232. What is the key difference between climate and weather?
(A) Climate refers to long-term atmospheric patterns, while weather is the short-term state.
(B) Weather refers to long-term patterns, while climate is the state of the atmosphere at a specific time.
(C) There is no difference between the two terms.
(D) Climate is measured by satellites, while weather is measured by ground stations.

NODIA

233. **Assertion (A) :** Industrial toxicology is a critical field within occupational health.
Reason (R) : It provides the scientific basis for understanding how workplace chemicals can cause harm and for establishing safe exposure limits.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

234. In the context of the atmosphere, 'general circulation' refers to:
(A) The global-scale system of winds.
(B) The daily sea breeze.
(C) The formation of a single thunderstorm.
(D) The air movement within a building.

235. The primary benefit of using Nature Based Solutions (NBSs) is that they:
(A) Ensuring they are always more expensive than traditional engineering solutions.
(B) Requiring absolutely no maintenance after the initial implementation phase.
(C) Being completely immune to all types of

safest way to perform it.
(C) Performance review for an individual employee.
(D) Financial analysis of a work-related task.

178. The primary purpose of an 'accident report' is to:
(A) Documenting investigation findings and recommending actions to prevent recurrences.
(B) Providing a document to be filed away without further safety considerations.
(C) Identifying specific individuals to blame for avoiding compensation claims.
(D) Creating a dramatic and engaging story for the company's internal newsletter.

179. Consider the following statements:
Statement I : An unsafe act, such as a worker not wearing required PPE, can be a contributing cause of an accident.
Statement II : An unsafe condition, such as a poorly lit stairway, is a factor inherent to the work environment.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

180. Consider the following statements about Pollution:
I. Noise pollution is caused by undesirable levels of sounds from sources like traffic and industry.
II. Marine pollution is exclusively the result of oil spills.
III. The London smog disaster was a severe air pollution event.
IV. Thermal pollution refers to the contamination of soil with hot materials.
Which of the above statements are correct?
(A) I and III only
(B) II and IV only
(C) I, II and III only
(D) I, III and IV only

181. The role of the ozone layer in the stratosphere is to:
(A) Trap heat and cause global warming.
(B) Generate the Earth's weather systems.
(C) Absorb harmful ultraviolet (UV) radiation from the sun.
(D) Produce oxygen for living organisms to breathe.

182. 'Agricultural respiratory diseases' often result from the inhalation of:
(A) Chemical fertilizers.
(B) Organic dusts, molds, and gases from agricultural materials.
(C) Clean, fresh country air.
(D) Water vapor from irrigation systems.

183. **Assertion (A) :** Ecological pyramids of energy are always upright.
Reason (R) : During the transfer of energy from one trophic level to the next, a significant amount of energy is lost, typically as heat, in accordance with the second law of thermodynamics.
(A) Both Assertion and Reason are true, and the Reason explains the Assertion.
(B) Both Assertion and Reason are true, but the Reason does not explain the Assertion.
(C) The Assertion is factually true, but the provided Reason is factually false.
(D) The Assertion is factually false, but the provided Reason is factually true.

184. The 'hydrological cycle' describes the continuous movement of:
(A) Water on, above, and below the surface of the Earth.
(B) Carbon between the atmosphere and oceans.
(C) Nitrogen through the soil and organisms.
(D) Energy from the sun to the Earth.

185. A core activity of occupational health services is:
(A) Managing the company's pension fund.
(B) Organizing social events for employees.
(C) Health surveillance and monitoring of the work environment.
(D) Developing marketing strategies for the company's products.

186. The difference between a food chain and a food web is that:
(A) A food chain is a single linear path of energy flow, while a food web shows multiple interconnected food chains.

Click Here to Buy book on Amazon

(B) A food chain is a complex network, while a food web is a simple linear path.
(C) Food chains only exist in terrestrial ecosystems, while food webs only exist in aquatic ones.
(D) A food web only includes producers and decomposers.

187. The term 'insolation' is a contraction of:
(A) Internal solar rotation.
(B) Insulated solar station.
(C) Instrumental solar observation.
(D) Incoming solar radiation.

188. Which of the following is NOT a renewable energy resource?
(A) Wind
(B) Uranium
(C) Hydropower
(D) Geothermal

189. Match List I with List II.
List I:
P. Habitat
Q. Ecological Niche
R. Population
S. Community
List II:
1. All the populations of different species living and interacting in an area
2. A group of individuals of the same species living in the same area
3. The functional role of a species in its ecosystem
4. The natural home or environment of an organism
(A) P-4, Q-3, R-2, S-1
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-1, R-2, S-3
(D) P-2, Q-3, R-4, S-1

190. The linkage between Strategic Environmental Assessment (SEA) and EcoDRR is that:
(A) EcoDRR is a tool for conducting an SEA.
(B) Both terms refer to the same process.
(C) SEA is focused on single projects, while EcoDRR is focused on national policy.
(D) SEA can help integrate disaster risk reduction into high-level policy and planning.

191. A 'cold wave' can be a disaster because it may lead to:
(A) Hypothermia and infrastructure damage like frozen pipes.
(B) Widespread heatstroke.
(C) Increased crop growth.
(D) Drier forest conditions, increasing fire risk.

192. Which of the following best defines 'Work Related Musculoskeletal Disorders' (WMSDs)?
(A) Highly infectious diseases transmitted within the professional healthcare setting.
(B) Musculoskeletal injuries or disorders caused or aggravated by work conditions.
(C) Development of cancers caused by chronic chemical exposure in the workplace.
(D) Psychological disorders arising from excessive levels of workplace-related stress.

193. The concept of 'ecological balance' implies a:
(A) Completely static and unchanging system.
(B) State of dynamic equilibrium where populations and environmental conditions are relatively stable.
(C) System where all species have equal population sizes.
(D) System without any predators.

194. The accident reporting requirement in India ensures that:
(A) Relevant government authorities are notified for oversight and data collection purposes.
(B) The media is informed immediately.
(C) The company's shareholders are alerted.
(D) The accident is kept secret from the public.

NODIA

195. Consider the following statements about the Investigation of Disasters and Accidents:
I. Incident Recall Technique (IRT) is a method for gathering information from people involved in an event.
II. A safety audit is a quick check of a single piece of equipment.
III. An 'unsafe condition' is another term for an 'unsafe act'.
IV. Accident causation models like the domino theory help explain how accidents occur.
V. The overall accident investigation process begins with writing the final report.
Which of the above statements are correct?

(A) I and IV only
(B) II and III only
(C) I, II and V only
(D) III, IV and V only

196. The study of the distribution of temperature, atmospheric pressure, and motion falls under:
(A) Ecology
(B) Industrial toxicology
(C) Biodiversity studies
(D) Climatology

197. 'Terminal heat' stress in agriculture primarily affects:
(A) The germination stage of a plant.
(B) The soil microbes.
(C) The late reproductive and grain-filling stage of a plant.
(D) The health of the farmer.

198. The primary objective of investigating industrial disasters is to:
(A) Find a single person to blame.
(B) Learn lessons to prevent future occurrences.
(C) Minimize the company's public relations damage.
(D) Fulfill a bureaucratic requirement with no real purpose.

199. The 'prevention' of occupational diseases focuses on:
(A) Providing effective treatment after the disease has developed.
(B) Ensuring all workers have adequate life insurance.
(C) Documenting the disease for statistical purposes only.
(D) Controlling and eliminating hazards at the source.

200. What is a key principle of 'ecosystem based Disaster Risk Reduction' (EcoDRR)?
(A) Leveraging the protective services of healthy ecosystems.
(B) Replacing all natural landscapes with concrete.
(C) Focusing only on post-disaster response.
(D) Ignoring the role of the environment in disaster risk.

201. Which of the following is a key component of an ecosystem's structure?
(A) The rate of photosynthesis.
(B) The speed of nutrient cycling.
(C) The abiotic (non-living) components.
(D) The rate of population growth.

202. The term 'xerosere' describes a successional sequence originating in a:
(A) Dry, arid area.
(B) Pond or lake.
(C) Salty marsh.
(D) Moderately moist forest.

203. The cost of an accident to a company includes all of the following EXCEPT:
(A) Medical costs for the injured employee.
(B) Repair costs for damaged equipment.
(C) Lost production time and administrative costs of investigation.
(D) The competitor's stock price increase.

204. Consider the following statements:
Statement I : The general atmospheric circulation is responsible for transferring heat from the tropics to the poles.
Statement II : The Coriolis effect, caused by the Earth's rotation, influences the direction of this circulation.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

205. Consider the following statements about Biodiversity:
I. Biodiversity includes diversity at the genetic, species, and ecosystem levels.
II. Threats to biodiversity include habitat destruction and invasive species.
III. Conservation of biodiversity has no economic benefits.
IV. Forest resources are an important repository of biodiversity.
Which of the above statements are correct?
(A) I, II and IV only
(B) I and III only
(C) II, III and IV only
(D) I, II, III and IV

Downloaded from www.pdf.tube

167. An 'accident causation model' is a theoretical framework used to:
(A) Calculate the cost of an accident.
(B) Understand the sequence of events and contributing factors that lead to an accident.
(C) Assign legal blame after an incident.
(D) Design safety posters for the workplace.

168. The primary composition of the Earth's atmosphere is approximately:
(A) 78% Nitrogen, 21% Oxygen
(B) 78% Oxygen, 21% Nitrogen
(C) 50% Nitrogen, 50% Oxygen
(D) 99% Carbon Dioxide

169. 'Integrated ecosystem management' is an approach that:
(A) Manages one species at a time, in isolation.
(B) Focuses only on the economic outputs of an ecosystem.
(C) Considers the entire ecosystem, including humans and their interactions, in decision-making.
(D) Separates land management from water management.

170. Consider the following statements about Occupational Health Services:
I. The basic structure of occupational health services is universally identical in all industries.
II. Functional units may include medical surveillance, environmental monitoring, and health education.
III. The primary activity is to provide general health insurance to all employees.
IV. Occupational health screening is a key activity to detect work-related health effects early.
V. These services focus exclusively on treating injuries and not on prevention.
Which of the above statements are correct?
(A) I and III only
(B) II and IV only
(C) I, III and V only
(D) II, IV and V only

171. In ecological terms, 'community dynamics' refers to:
(A) The study of a single organism's behavior.
(B) The static, unchanging nature of an ecosystem.
(C) The flow of energy in a straight line.
(D) The changes in community structure and composition over time.

172. The term 'global warming' is a specific aspect of the broader phenomenon of:
(A) Ozone depletion
(B) Climate change
(C) Acid rain
(D) Water pollution

173. What is the most significant threat to biodiversity globally?
(A) Volcanic eruptions
(B) Natural selection
(C) Habitat loss and degradation
(D) Seasonal migration of animals

174. Which of the following is a 'notifiable occupational disease' in many jurisdictions?
(A) The common cold
(B) A sprained ankle from a fall
(C) A headache from workplace stress
(D) Silicosis from exposure to silica dust

175. Arrange the typical stages of ecological succession (sere) in chronological order.
I. Climax stage
II. Pioneer species colonization
III. Intermediate stages with increasing complexity
IV. Nudation (creation of a bare area)
(A) IV, II, III, I
(B) II, IV, III, I
(C) I, III, II, IV
(D) IV, III, I, II

176. The 'risk assessment' process for a fire disaster involves evaluating:
(A) Only the likelihood that a fire will start.
(B) Both the likelihood of a fire and its potential consequences.
(C) Only the potential consequences if a fire occurs.
(D) The cost of firefighting equipment.

177. A 'Job Safety Analysis' (JSA) is a:
(A) Reactive process done only after an accident.
(B) Proactive process to identify hazards associated with a job and determine the

NODIA

216. 'Cardio Pulmonary Resuscitation' (CPR) is an emergency procedure used when a person:
(A) Has stopped breathing and has no pulse.
(B) Has a minor cut.
(C) Feels tired at work.
(D) Has a headache.

217. The primary health effect of 'ozone layer depletion' is an increased risk of:
(A) Respiratory diseases.
(B) Water-borne infections.
(C) Skin cancer and cataracts.
(D) Heart disease.

218. The main purpose of the Incident Recall Technique (IRT) is to:
(A) Help individuals recall details of an incident without leading them.
(B) Re-enact the accident for training purposes.
(C) Immediately determine who was at fault.
(D) Create a computer simulation of the incident.

219. Which of the following is the best example of 'traditional environmental wisdom' for disaster management?
(A) Building nuclear-powered desalination plants.
(B) Launching a network of GPS satellites.
(C) Constructing a nationwide highway system.
(D) Using indigenous knowledge of plant and animal behavior to predict weather patterns.

220. Consider the following statements about Climate Change and its Effects:
I. Global warming refers to the long-term heating of Earth's climate system.
II. Acid rain is caused by high levels of atmospheric CO2.
III. Ozone layer depletion is caused by CFCs and leads to increased UV radiation.
IV. Climate change can affect population health by altering the distribution of disease vectors.
V. A cold wave is a period of abnormally hot weather.
Which of the above statements are correct?
(A) I, III and IV only
(B) II, IV and V only
(C) I, II and III only
(D) I, III and V only

221. An audiometric test is a key component of a hearing conservation program in which type of occupational environment?
(A) A quiet library.
(B) A food processing plant with strong odors.
(C) An office with controlled temperature.
(D) A workplace with high noise levels.

222. The term 'population dynamics' encompasses the study of:
(A) The physical geography of a region.
(B) The chemical interactions between different species.
(C) The geological history of an area.
(D) The changes in the size and composition of populations over time.

223. What does 'preparedness' for a fire disaster involve?
(A) Planning, training, and drills undertaken before a fire occurs.
(B) Analyzing the fire after it is extinguished.
(C) The immediate act of fighting the fire.
(D) The long-term recovery and rebuilding process.

224. The fundamental difference between an 'unsafe act' and an 'unsafe condition' is that:
(A) An act is intentional, while a condition is accidental.
(B) An act is behavioral, while a condition is environmental or physical.
(C) An act is caused by management, while a condition is caused by workers.
(D) There is no difference, they mean the same thing.

225. Arrange the following processes of the hydrological cycle in a logical sequence, starting from water in the ocean.
I. Precipitation
II. Evaporation
III. Condensation
IV. Runoff
(A) II, III, I, IV
(B) I, II, III, IV
(C) III, I, IV, II
(D) II, IV, I, III

226. The classification of industrial disasters helps in:

Click Here to Buy book on Amazon

(D) Builds up in the body over time.

147. 'Fire following an earthquake' poses a complex challenge because:
(A) It is a completely unforeseeable event.
(B) Fire is not a known consequence of seismic activity.
(C) Water mains for firefighting may be broken.
(D) Earthquakes only happen in areas without flammable materials.

148. The structural aspect of a population refers to:
(A) Its birth rate and death rate.
(B) Its interaction with other species.
(C) Its rate of growth.
(D) Its density and dispersion patterns.

149. The pollution of the Ganga and Yamuna rivers highlights the impact of:
(A) Solely natural pollutants originating from geological or climatic sources.
(B) Only thermal pollution generated by cooling systems in nearby power plants.
(C) A combination of municipal, industrial, and agricultural pollution sources.
(D) Airborne pollution particles settling into the water from urban centers.

150. A key indicator of climate resilience at a community level would be:
(A) The number of cars per capita.
(B) The diversity of livelihoods and access to resources.
(C) The height of the tallest building.
(D) The presence of a single, large-scale industry.

151. What is the fundamental purpose of biodiversity conservation?
(A) The scientific process to ensure all species are catalogued and named correctly.
(B) Selecting the most economically valuable species for intensive agricultural farming.
(C) Eliminating all predator species to protect vulnerable prey within a specific habitat.
(D) Maintaining the health and variety of life and ecological systems for future generations.

152. The function of an ecological pyramid is to:
(A) Represent the flow of energy or the distribution of biomass/numbers among trophic levels.
(B) Show the biogeochemical cycle of an element.
(C) Map the geographical range of a particular species.
(D) Illustrate the process of ecological succession.

NODIA

153. 'Frost' is a significant environmental concern primarily because it can:
(A) Increase the risk of urban fires.
(B) Deplete the ozone layer.
(C) Cause widespread damage to crops and plants.
(D) Trigger earthquakes.

154. Consider the following statements:
Statement I : Industrial disasters can be classified based on their cause, such as process-related or human-error related.
Statement II : The investigation of industrial disasters is primarily used for identifying root causes and preventing recurrence.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

155. Consider the following regarding the 'Overall Accident Investigation Process':
I. The first step is to immediately start interviewing witnesses.
II. A 'planning document' helps to structure the investigation.
III. The 'investigator's kit' contains tools for evidence collection.
IV. 'Four types of evidences' are people, parts, position, and paper.
Which of the above statements are correct?
(A) I and II only
(B) III and IV only
(C) II, III and IV only
(D) I, II, III and IV

156. The main role of 'disaster control' in a workplace is to:
(A) Prevent any disaster from ever happening.
(B) Manage and mitigate the effects of a disaster once it has occurred.
(C) Investigate the financial aspects of a disaster.

natural and technological hazards.
(D) Providing multiple co-benefits like biodiversity enhancement and carbon sequestration.

236. A 'cumulative effect' of an industrial toxicant is one that builds up over:
(A) A single, high-level exposure.
(B) Repeated or continuous exposure over time.
(C) A few seconds of exposure.
(D) The effect is not related to exposure time.

237. The investigation of an industrial disaster is crucial for:
(A) Providing entertainment for the public.
(B) Quickly rebuilding the facility exactly as it was.
(C) Identifying systemic failures and improving safety regulations and practices.
(D) Increasing insurance premiums for all industries.

238. An example of a 'corporate hazard' distinct from an industrial one could be:
(A) A chemical explosion in a factory.
(B) A mine collapse.
(C) A major oil spill from a tanker.
(D) High levels of workplace stress and burnout leading to health issues.

239. Match List I with List II.
List I:
P. Renewable Resource
Q. Non-Renewable Resource
R. Biodiversity Threat
S. Biogeochemical Cycle
List II:
1. Coal
2. Nitrogen Cycle
3. Wind Energy
4. Habitat Loss
(A) P-1, Q-3, R-2, S-4
(B) P-3, Q-1, R-4, S-2
(C) P-4, Q-2, R-1, S-3
(D) P-3, Q-4, R-1, S-2

240. The main purpose of a 'planning matrix' during an accident investigation is to:
(A) Create a visual map of the accident scene.
(B) Organize tasks, timelines, and responsibilities for the investigation team.
(C) Calculate the final cost of the damages.
(D) Write the press release for the media.

241. Which of the following is NOT a type of industrial toxicology evidence sought in an accident investigation?
(A) People (witness statements)
(B) Predictions (guesses about what might have happened)
(C) Parts (equipment and materials)
(D) Paper (documents and records)

NODIA

242. The risk of 'fire following earthquakes' is an example of a:
(A) Cascading or secondary hazard.
(B) Socio-economic hazard.
(C) Primary meteorological hazard.
(D) Biological hazard.

243. The structure of a population is described by its:
(A) Rate of energy consumption.
(B) Role in the food web.
(C) Density, dispersion, and age structure.
(D) Genetic makeup.

244. Consider the following statements:
Statement I : Community dynamics includes the study of ecological succession.
Statement II : A hydrosere is a succession that starts in a water body, while a xerosere starts in a dry area.
Which of the above statements is/are correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true but Statement II is false.
(D) Statement I is false but Statement II is true.

245. Consider the following statements about the 'Global Concern' for the environment:
I. Environmental problems are now recognized as having impacts that cross national borders.
II. Water and forest resources are abundant and not a source of concern.
III. Loss of biodiversity is considered a major global environmental issue.
IV. Non-renewable resources like fossil fuels are a key focus of environmental discussions due to their finite nature and pollution potential.
V. The concept of 'global concern' is primarily

281. A loose safety guard on a machine that has not been repaired is an example of a(n):
(A) Unsafe condition.
(B) Unsafe act.
(C) Reportable accident.
(D) Incident Recall Technique.

282. What is the primary purpose of an accident causation model?
(A) To calculate the exact financial cost of an accident.
(B) To provide a framework for understanding the multiple factors leading to an accident.
(C) To identify a single person to blame for an incident.
(D) To serve as the legal report submitted to authorities.

283. Which of the following best describes the core principle of accident prevention as outlined in the passage?
(A) Focusing solely on punishing individuals for unsafe acts.
(B) Identifying and eliminating both hazardous conditions and unsafe behaviors.
(C) Reacting to accidents only after they have occurred.
(D) Relying exclusively on the safety committee to ensure workplace safety.

284. The distinction between a "reportable" and "non-reportable" accident is primarily based on:
(A) Pre-defined legal and organizational criteria.
(B) The time of day the accident occurred.
(C) Whether the accident was caused by an unsafe act or an unsafe condition.
(D) The personal opinion of the supervisor.

285. A safety committee contributes to accident prevention mainly by:
(A) Performing the duties of all injured workers.
(B) Having the sole authority to fire employees for unsafe acts.
(C) Promoting a safety culture and participating in the investigation process.
(D) Designing and manufacturing all safety equipment for the company.

Direction : Please read the following source carefully.

Proactive safety management relies on a suite of analytical tools to identify and mitigate hazards before they result in accidents. These tools vary in their scope and application. Job Safety Analysis (JSA) is a systematic procedure that breaks down a specific job into its constituent tasks to identify potential hazards and recommend safe work procedures for each step. For a broader assessment, a safety survey is conducted to gather general information about safety practices and conditions across a department or an entire facility. More focused is the safety inspection, which is a formal, planned walk-through to identify and record specific hazards or non-compliance with standards, often using a checklist. In contrast, safety sampling is a technique used to measure the safety performance of a group or area by conducting a number of random observations to determine the ratio of safe to unsafe practices. The most comprehensive evaluation is the Safety Audit, which is a systematic, critical, and independent examination of a company's entire health and safety management system. It assesses not just physical conditions but also policies, procedures, training, and overall effectiveness, providing a complete picture of the organization's safety performance and legal compliance.

Based on the above source, attempt the following five questions.

286. Which safety assessment tool involves a systematic breakdown of a single job into its individual tasks to identify hazards?
(A) Safety Audit
(B) Safety Survey
(C) Safety Sampling
(D) Job Safety Analysis (JSA)

287. A manager wants to get a quick, quantitative measure of how often workers in a specific area are following correct lifting procedures. Which tool would be most appropriate for this purpose?
(A) Safety Audit
(B) Job Safety Analysis (JSA)
(C) Safety sampling.
(D) Safety Survey

288. The primary difference between a safety inspection and a Safety Audit is that:
(A) An inspection is reactive, while an audit is proactive.

Downloaded from www.pdf.tube

252. The structure of an ecosystem is primarily defined by:
(A) The composition and arrangement of its living and non-living components.
(B) The rate of energy transfer between trophic levels.
(C) The processes of photosynthesis and decomposition.
(D) The interaction between biogeochemical cycles.

253. According to the passage, the functional aspects of an ecosystem primarily include:
(A) Species diversity and the number of trophic levels.
(B) The physical characteristics of the environment.
(C) Energy flow and the cycling of nutrients.
(D) The categorization of ecosystems into terrestrial or aquatic types.

254. If a biologist is studying how a specific species of bird sources its food, builds its nest, and interacts with predators, their primary focus is on the bird's:
(A) Habitat.
(B) Biotic community.
(C) Ecosystem structure.
(D) Ecological niche.

255. The interaction between a community of living organisms and their non-living physical environment constitutes a(n):
(A) Ecological niche.
(B) Biogeochemical cycle.
(C) Ecosystem.
(D) Habitat.

Direction : Please read the following source carefully.

The flow of energy through an ecosystem is a fundamental process governed by the laws of thermodynamics. The first law, the law of conservation of energy, dictates that energy can neither be created nor destroyed, only transformed. In an ecosystem, this is seen as solar energy being converted into chemical energy by producers. The second law of thermodynamics, however, is crucial for understanding the structure of ecosystems, as it states that during any energy transfer, some energy is inevitably lost as heat, leading to an increase in entropy. This law explains why the flow of energy in an ecosystem is unidirectional and non-cyclical. Energy flows from the sun to producers, then to consumers at various trophic levels, with a significant loss at each step. This progressive loss of energy limits the length of food chains, which represent linear pathways of energy transfer. More complex and realistic representations are found in food webs, which illustrate the interconnected and multiple feeding relationships within a community. The efficiency of energy transfer from one trophic level to the next is often depicted using ecological pyramids, particularly the pyramid of energy, which is always upright because of the continuous energy loss at each successive level. This hierarchical energy structure is essential for maintaining ecological balance and community dynamics.

Based on the above source, attempt the following five questions.

NODIA

256. The unidirectional and non-cyclical nature of energy flow in an ecosystem is a direct consequence of which scientific principle?
(A) The first law of thermodynamics.
(B) The second law of thermodynamics.
(C) The concept of biogeochemical cycling.
(D) The principle of ecological balance.

257. Which of the following best describes the primary difference between a food chain and a food web?
(A) A food chain represents energy flow in aquatic ecosystems, while a food web represents it in terrestrial ecosystems.
(B) A food chain is limited to three trophic levels, while a food web can have unlimited levels.
(C) A food chain includes decomposers, whereas a food web excludes them.
(D) A food chain illustrates a single linear pathway of energy transfer, whereas a food web shows multiple interconnected pathways.

258. The passage suggests that the pyramid of energy in an ecosystem is always upright because:
(A) There is a progressive loss of energy at each transfer between trophic levels.
(B) The biomass of producers is always greater

carefully.

Occupational health and safety is a multidisciplinary field concerned with protecting the safety, health, and welfare of people engaged in work. A central component is the identification and management of occupational hazards, which can be broadly classified based on their nature, such as physical, chemical, biological, or ergonomic. The impact and role of these hazards vary significantly across different industries. The overall health scenario in India reflects the challenges in managing these risks effectively. The concept of occupational health extends beyond mere absence of disease to encompass the complete physical, mental, and social well-being of workers. To achieve this, occupational health services are established, typically comprising a structured framework with distinct functional units and activities. These services are fundamental for implementing preventative measures. A key activity is occupational health screening, designed to detect potential health problems or diseases at an early stage. This is crucial for managing occupational diseases, which are illnesses directly caused by exposure to hazards at the workplace. Certain severe or prevalent conditions may be classified as notifiable occupational diseases, requiring mandatory reporting to government authorities to facilitate public health monitoring and prevention strategies.

Based on the above source, attempt the following five questions.

271. The primary purpose of classifying occupational hazards is to:
(A) Assign blame for accidents after they occur.
(B) Determine the financial compensation for affected workers.
(C) Understand their nature in order to effectively manage the associated risks.
(D) Eliminate all forms of work across different industries.

272. The concept of occupational health, as described in the passage, is best understood as:
(A) The treatment of injuries that occur at the workplace.
(B) The complete physical, mental, and social well-being of workers.
(C) The legal requirement for companies to provide health insurance.
(D) The absence of notifiable diseases within a specific industry.

273. What is the main objective of occupational health screening?
(A) To determine the productivity level of an employee.
(B) To provide immediate treatment for all occupational diseases.
(C) To fulfill a legal formality with no practical health benefits.
(D) To detect potential work-related health problems at an early stage.

274. A "notifiable occupational disease" is distinguished from other occupational diseases by:
(A) The requirement for it to be reported to government authorities.
(B) The fact that it is completely preventable.
(C) The severity of its symptoms being always fatal.
(D) The fact that it only affects workers in one specific industry.

275. Based on the passage, the functional units and activities of occupational health services are primarily aimed at:
(A) Increasing the profitability of the company.
(B) Conducting research on new industrial processes.
(C) Implementing preventative measures and promoting worker well-being.
(D) Documenting the history of industrial accidents.

Direction : Please read the following source carefully.

Industrial toxicology examines the adverse effects of chemical agents encountered in the workplace, categorizing effects as local, systemic, chronic, temporary, or cumulative. Local effects occur at the site of contact, while systemic effects happen after the substance is absorbed and distributed throughout the body. The entry of carcinogens into human systems is a major concern, with pathways including inhalation, ingestion, and dermal absorption. A separate but related field is ergonomics, which focuses on designing the workplace and job tasks to fit the capabilities and limitations of the human body. A primary

Click Here to Buy book on Amazon

(B) The classification of world climates into different zones.
(C) The movement of water through the atmosphere and land.
(D) The capacity of a system to absorb and recover from shocks.

Direction : Please read the following source carefully.

An eco-based approach to disaster management emphasizes the use of healthy, well-managed ecosystems to enhance community resilience and reduce the physical, social, and economic impacts of natural hazards. This paradigm is encapsulated in Ecosystem-based Disaster Risk Reduction (EcoDRR), which integrates the sustainable management, conservation, and restoration of ecosystems into broader disaster risk reduction strategies. Key tools and approaches include watershed management, coastal habitat restoration (e.g., mangroves), and sustainable forestry. This approach often leverages traditional environmental wisdom, recognizing that indigenous and local communities possess valuable knowledge about managing natural resources for resilience. The Partnership for Environment and DRR (PEDRR) is a global initiative that promotes and supports the implementation of such eco-based solutions. Furthermore, the linkage between Strategic Environmental Assessment (SEA) and EcoDRR is significant; SEA can be used to ensure that development plans and policies systematically consider environmental factors to reduce disaster risks and enhance ecosystem services. The overall goal is to move towards integrated ecosystem management, where disaster risk is not treated in isolation but as part of a holistic approach to environmental stewardship and sustainable development, often termed Nature-Based Solutions (NBSs).

Based on the above source, attempt the following five questions.

266. The primary principle of Ecosystem-based Disaster Risk Reduction (EcoDRR) is to:
(A) Replace all engineered solutions with natural ones.
(B) Use ecosystem management to reduce the impacts of natural hazards.
(C) Focus exclusively on post-disaster ecosystem recovery.
(D) Relocate communities away from all high-risk ecosystems.

267. The passage suggests that traditional environmental wisdom is valuable in disaster management because it:
(A) Provides modern technological solutions for disaster prediction.
(B) Contains knowledge about managing local natural resources for resilience.
(C) Offers a framework for international partnerships like PEDRR.
(D) Is the primary focus of Strategic Environmental Assessment (SEA).

268. How does Strategic Environmental Assessment (SEA) link with EcoDRR?
(A) It helps integrate environmental considerations into policies to reduce disaster risks.
(B) It provides funding for all EcoDRR projects globally.
(C) It is a tool used exclusively for assessing post-disaster ecological damage.
(D) It replaces the need for traditional disaster risk management plans.

NODIA

269. Which of the following is an example of an EcoDRR or Nature-Based Solution mentioned in the passage?
(A) Building higher concrete seawalls to prevent coastal flooding.
(B) Implementing a complex satellite-based early warning system.
(C) Restoring mangrove forests to protect coastlines from storm surges.
(D) Constructing earthquake-proof buildings in urban centers.

270. The Partnership for Environment and DRR (PEDRR) is described as an initiative that:
(A) Conducts scientific research on climate change.
(B) Develops global environmental laws and treaties.
(C) Directly funds all disaster relief efforts.
(D) Promotes and supports the use of eco-based solutions for DRR.

Direction : Please read the following source

driven by international issues.

Which of the above statements are correct?

(A) I, II and V only
(B) II, III and V only
(C) I, III and IV only
(D) I, IV and V only

246. What is the primary focus of ergonomics?

(A) Protecting workers from chemical exposures.
(B) Adapting the job and workplace to the physical and mental capabilities of the worker.
(C) Providing financial compensation for injuries.
(D) Enforcing disciplinary action for safety violations.

247. The prevention of agricultural respiratory diseases involves measures like:

(A) Working longer hours to finish tasks quickly.
(B) Ignoring early symptoms like coughing.
(C) Increasing the use of pesticides.
(D) Using proper ventilation and respiratory protection when handling dusty or moldy materials.

248. The 'functions of an investigator' in an accident include all of the following EXCEPT:

(A) Determining legal guilt or innocence.
(B) Securing the scene.
(C) Collecting evidence.
(D) Analyzing facts to find root causes.

249. The 'vulnerability assessment' for a fire disaster considers:

(A) Only the flammability of materials.
(B) Only the weather forecast.
(C) The susceptibility of people, property, and the environment to harm from a potential fire.
(D) The cost of insurance premiums.

250. The concept of 'disaster risk management' as it relates to natural resources and ecosystems is best embodied by:

(A) The integration of ecosystem management and traditional wisdom into disaster planning.
(B) The complete avoidance of all natural areas.
(C) A total reliance on engineered solutions like dams and levees.
(D) The belief that disasters are acts of nature that cannot be managed.

Direction : Please read the following source carefully.

Ecology, as a scientific discipline, is structured into several distinct branches that explore the intricate relationships between organisms and their environment. Central to this study are the concepts of habitat and ecological niche. A habitat can be understood as the specific physical location or 'address' where an organism lives, characterized by its unique set of environmental conditions. In contrast, an ecological niche represents the functional role or 'profession' of a species within its ecosystem. This includes not just its physical space but also its interactions with other species and its role in the flow of energy and nutrients. Ecosystems themselves are the fundamental units of ecological study, defined by the interaction between a community of living organisms (biotic components) and their non-living physical and chemical environment (abiotic components). They are categorized broadly, for example, into terrestrial or aquatic types. The function of an ecosystem is manifested through processes like energy flow and biogeochemical cycling, while its structure is defined by the composition and arrangement of its biotic and abiotic components, such as species diversity and trophic levels. Understanding both the functional and structural aspects is crucial for comprehending the overall health and stability of any ecosystem.

Based on the above source, attempt the following five questions.

251. Which of the following statements best distinguishes between a habitat and an ecological niche?

(A) Habitat refers to biotic interactions, while niche refers to abiotic conditions.
(B) Habitat describes the physical environment of an organism, while niche describes its functional role within that environment.
(C) Habitat is the functional role of a species, whereas niche is its physical address.
(D) Habitat is concerned with energy flow, whereas niche is concerned with biogeochemical cycles.

Downloaded from www.pdf.tube

goal of ergonomics is the prevention of Work-Related Musculoskeletal Disorders (WRMSDs), which are injuries and disorders of the muscles, nerves, tendons, joints, cartilage, and spinal discs. These disorders often result from repetitive movements, awkward postures, or excessive force. Industrial disasters, which can have catastrophic toxicological and physical consequences, require a systematic approach to investigation and prevention. This involves classifying disasters, learning from them, and implementing robust safety systems. Even seemingly less hazardous environments like offices and farms present risks; corporate and office hazards can lead to WRMSDs, while agricultural settings have specific respiratory hazards and diseases.

Based on the above source, attempt the following five questions.

276. An allergic skin reaction that occurs immediately after a chemical splashes on a worker's arm would be classified as what type of toxic effect?
(A) Local
(B) Systemic
(C) Chronic
(D) Cumulative

277. The primary focus of ergonomics in the workplace is to:
(A) Study the long-term effects of chemical carcinogens.
(B) Investigate the classification of industrial disasters.
(C) Analyze agricultural respiratory hazards and diseases.
(D) Adapt job tasks and the work environment to fit human capabilities.

278. A worker who develops carpal tunnel syndrome from performing the same hand movement thousands of times a day is most likely suffering from a:
(A) Systemic toxic effect.
(B) Work-Related Musculoskeletal Disorder (WRMSD).
(C) Chronic agricultural respiratory disease.
(D) Temporary local effect from a carcinogen.

279. According to the passage, which of the following is a recognized pathway for carcinogens to enter the human system?
(A) Ergonomic stress
(B) Psychological trauma
(C) Dermal absorption
(D) Auditory exposure

280. The distinction between a systemic and a local toxic effect is based on:
(A) Whether the effect is temporary or permanent.
(B) The duration of exposure to the chemical agent.
(C) The classification of the chemical as a carcinogen.
(D) Whether the effect is confined to the point of contact or affects the entire body.

Direction : Please read the following source carefully.

Accident investigation and reporting are critical components of a proactive safety management system. A foundational concept is the distinction between an unsafe act, which is a violation of an accepted safe procedure by a person, and an unsafe condition, which is a physical or environmental hazard. The principles of accident prevention are based on identifying and eliminating both. Accident causation models are theoretical frameworks used to understand the sequence of events and underlying factors that lead to an accident, moving beyond simple blame. The role of a safety committee is often central to this process, promoting a culture of safety and participating in investigations. The cost of an accident includes not just direct costs like medical expenses but also significant indirect costs like lost productivity and damage to morale. Accidents are categorized as reportable or non-reportable based on legal and organizational criteria, which dictate the necessary follow-up actions. The overall accident investigation process involves a structured response, including securing the scene, gathering evidence, and conducting interviews. The Incident Recall Technique (IRT) is one method used to help witnesses remember details. A comprehensive accident report is the final output, documenting findings and recommending corrective actions to prevent recurrence.

Based on the above source, attempt the following five questions.

NODIA

than that of consumers.
(C) Energy is created at each successive trophic level.
(D) Organisms at higher trophic levels are larger in size.

259. According to the first law of thermodynamics as applied to ecosystems, solar energy is:
(A) Destroyed as it passes through trophic levels.
(B) Created by producer organisms.
(C) Transformed into chemical energy by producers.
(D) Lost entirely as heat during photosynthesis.

260. The limited length of food chains in an ecosystem is primarily a result of:
(A) The significant loss of energy at each trophic level.
(B) The limited number of species available.
(C) The cyclical nature of nutrient flow.
(D) The stable nature of most ecological communities.

Direction : Please read the following source carefully.

Climate resilience refers to the capacity of social, economic, and environmental systems to absorb stresses and shocks from extreme weather events and long-term climate change, and to reorganize while maintaining their essential function, identity, and structure. This concept is deeply rooted in climatology, the study of the atmosphere and its phenomena. The atmosphere's origin, composition, and structure—comprising layers like the troposphere and stratosphere—are fundamental to understanding climate dynamics. Key climatic elements such as insolation (incoming solar radiation), the distribution of temperature, atmospheric pressure, and motion drive the general atmospheric circulation, which shapes global climate patterns. Formal classifications of world climates, such as the widely recognized schemes developed by Koppen and Thornthwaite, use temperature and precipitation data to delineate distinct climate zones. The Earth's Heat Budget, which balances incoming and outgoing radiation, and the Hydrological Cycle are critical processes that govern the planet's climate system. Indicators of climate resilience might include the robustness of infrastructure, the diversity of livelihoods, and the effectiveness of early warning systems. Understanding the causes and theories behind climate variability is essential for building this adaptive capacity.

Based on the above source, attempt the following five questions.

261. According to the passage, climate resilience is best defined as the ability of a system to:
(A) Prevent all impacts of climate change and extreme weather events.
(B) Revert to its original state immediately after a climate-related shock.
(C) Predict future climate events with perfect accuracy.
(D) Absorb climatic stresses and reorganize while maintaining essential functions.

262. The climate classification schemes of Koppen and Thornthwaite are primarily based on which two climatic elements?
(A) Atmospheric pressure and wind motion.
(B) Temperature and precipitation.
(C) Insolation and the Heat Budget.
(D) Atmospheric composition and structure.

263. Which of the following would be considered an indicator of climate resilience as described in the source?
(A) A high dependency on a single agricultural crop.
(B) The absence of any historical extreme weather events.
(C) The diversity of economic livelihoods within a community.
(D) The total amount of annual insolation received.

264. The study of the origin, composition, and structure of the atmosphere, along with its associated phenomena, is known as:
(A) Hydrology.
(B) Resilience theory.
(C) Ecosystem dynamics.
(D) Climatology.

265. The concept of the Earth's Heat Budget is critical for understanding climate systems because it describes:
(A) The balance between incoming solar radiation and outgoing radiation.

Click Here to Buy book on Amazon

(B) An inspection focuses on specific hazards, while an audit examines the entire safety management system.
(C) An inspection is done by employees, while an audit is done only by external regulators.
(D) An inspection is undocumented, while an audit is formally reported.

289. A team conducting a planned walk-through of a factory floor with a checklist to identify issues like blocked fire exits and unguarded machinery is performing a:
(A) Job Safety Analysis (JSA).
(B) Safety Audit.
(C) Safety sampling.
(D) Safety inspection.

290. Which of the described tools provides the most comprehensive and critical examination of an organization's entire health and safety management system, including policies and procedures?
(A) Safety Audit
(B) Safety Survey
(C) Job Safety Analysis (JSA)
(D) Safety Inspection

Direction : Please read the following source carefully.

Environmental health is profoundly influenced by weather, climate variability, and long-term climate change. Specific meteorological events can pose direct threats; for example, hailstorms can cause physical injury and damage, while intense heat waves can lead to terminal heat, heat-related illnesses like heatstroke, and significant mortality. Conversely, cold waves, frost, and fog present risks such as hypothermia and transportation accidents. Beyond these immediate weather-related disasters, broader climate change phenomena have severe consequences for population health. Global warming, the long-term heating of Earth's climate system, exacerbates the frequency and intensity of heat waves. Acid rain, caused by atmospheric pollutants, can damage ecosystems and has been linked to respiratory problems. Perhaps one of the most critical long-term threats is ozone layer depletion. The thinning of the stratospheric ozone layer allows more harmful ultraviolet (UV) radiation to reach the Earth's surface, leading to increased rates of skin cancer, cataracts, and immune system suppression. Understanding the intricate effects of these climatic factors on population health is essential for developing public health strategies and adaptation measures to mitigate risks and protect vulnerable communities.

Based on the above source, attempt the following five questions.

291. According to the passage, a primary and direct health effect of a severe heat wave is:
(A) An increase in acid rain.
(B) The formation of frost and fog.
(C) The occurrence of heat-related illnesses like heatstroke.
(D) The depletion of the ozone layer.

292. The primary public health concern associated with ozone layer depletion is:
(A) Increased exposure to harmful ultraviolet (UV) radiation.
(B) An increase in respiratory illnesses due to acid rain.
(C) A higher incidence of hypothermia during cold waves.
(D) More frequent and intense hailstorms.

293. Which of the following best describes the relationship between global warming and heat waves as presented in the source?
(A) Global warming is caused by frequent heat waves.
(B) Global warming reduces the intensity of heat waves.
(C) Global warming and heat waves are unrelated phenomena.
(D) Global warming can increase the frequency and intensity of heat waves.

294. Acid rain is presented in the passage as a climate change phenomenon that can lead to:
(A) Terminal heat and heatstroke.
(B) Respiratory problems and ecosystem damage.
(C) Ozone layer depletion.
(D) Increased rates of skin cancer.

295. The passage discusses cold waves, frost, and fog primarily as examples of:
(A) Long-term climate change trends.
(B) Phenomena caused by ozone layer depletion.

Downloaded from www.pdf.tube

(C) Weather events with specific risks to human health and safety.
(D) Direct consequences of global warming.

Direction : Please read the following source carefully.

The sustainable management of natural resources is a cornerstone of global environmental concern. Resources are broadly classified into renewable and non-renewable categories. Non-renewable resources, such as fossil fuels, exist in finite quantities and are depleted by use. Renewable resources, like solar energy, can replenish themselves naturally over time. However, some resources like water and forests, while technically renewable, are vulnerable to depletion if managed unsustainably. Water resources are vital for all life and their scarcity or pollution can have devastating ecological and social consequences. Forest resources are crucial not only for timber but also for regulating climate, preventing soil erosion, and harboring a vast proportion of the planet's biodiversity. The concept of biodiversity, or the variety of life on Earth, is intrinsically linked to the health of these resources. The conservation of biodiversity is a critical objective, but it faces numerous threats. The primary threats to biodiversity often stem directly from the unsustainable exploitation of natural and energy resources, leading to habitat destruction, pollution, and climate change. Therefore, a holistic approach that integrates the management of water, forest, and energy resources is essential for effective biodiversity conservation.

Based on the above source, attempt the following five questions.

296. According to the passage, why are water and forest resources considered particularly vulnerable despite being renewable?
(A) Because they are not as important as non-renewable resources.
(B) Because their replenishment cycle is too rapid for human use.
(C) Because they exist in finite quantities that cannot be regenerated.
(D) Because they can be depleted if they are exploited unsustainably.

297. The passage identifies the primary threat to biodiversity as:
(A) The unsustainable exploitation of natural and energy resources.
(B) The natural process of species evolution and extinction.
(C) The classification of resources into renewable and non-renewable.
(D) The scientific study and conservation efforts themselves.

298. Which of the following is NOT mentioned in the passage as a key role of forest resources?
(A) Harboring biodiversity.
(B) Generating non-renewable energy.
(C) Regulating climate.
(D) Preventing soil erosion.

299. An inferential conclusion from the passage is that effective biodiversity conservation requires:
(A) Focusing solely on protecting endangered species in zoos.
(B) An integrated approach to managing various natural resources.
(C) A complete halt to the use of all forest and water resources.
(D) Prioritizing the exploitation of renewable resources over non-renewable ones.

300. Based on the classification described in the text, which of the following is a non-renewable resource?
(A) Fossil fuels.
(B) Solar energy.
(C) Forest timber.
(D) Fresh water.

NODIA

ANSWERS

1. (B) Solar power
Renewable energy resources are naturally replenished on a human timescale, making them sustainable for long-term use. These sources include sunlight, wind, rain, tides, waves, and geothermal heat. Unlike fossil fuels, which take millions of years to form and are finite, sunlight is abundant and inexhaustible. Harnessing this energy through technology provides a clean alternative that significantly reduces the carbon footprint and environmental degradation associated with traditional power generation.

2. (A) Habitat is the 'address' of an organism, while niche is its 'profession' or functional role.
In ecology, the environment where an organism lives is its habitat, defining the physical space and conditions it requires for survival. Conversely, an ecological niche represents the specific functional role and position the species occupies within that ecosystem. This includes its interactions with other species, its diet, and its use of resources. While multiple species can share a habitat, each species typically occupies a unique niche to minimize competition.

3. (C) Energy is created by producers and destroyed by decomposers.
The laws of thermodynamics dictate that energy cannot be created or destroyed, only transformed from one form to another. In ecosystems, producers capture solar energy and convert it into chemical energy through photosynthesis. This energy then flows through various trophic levels, with a significant portion lost as heat at each step. Decomposers break down organic matter, but they do not destroy energy; they simply facilitate its release.

4. (D) Air pollution
The Great Smog of London in 1952 was a severe environmental event caused by a combination of industrial emissions and cold weather conditions. A thick layer of soot and sulfur dioxide from coal burning became trapped near the ground, creating a lethal smog. This historical disaster highlighted the catastrophic health impacts of uncontrolled atmospheric contaminants and led to the passage of the Clean Air Act, revolutionizing environmental policy.

5. (B) II and III only
Forest resources are categorized as renewable because trees can regrow and be replanted within a reasonable timeframe. Similarly, water is a cyclic resource that moves through the hydrological cycle, maintaining a constant presence on Earth despite localized shortages. Conversely, non-renewable resources cannot be replenished within a human lifespan. Biodiversity is fundamentally considered a vital natural resource as it provides essential ecosystem services and supports life on our planet.

6. (C) Statement I is true but Statement II is false.
Climatology fundamentally examines the origin, composition, and structure of the atmosphere to understand long-term weather patterns. A critical aspect of this study is the hydrological cycle, which is deeply interconnected with the atmospheric heat budget. The movement of water through evaporation and condensation involves significant energy transfers. Therefore, the water cycle and the heat budget are interdependent processes that collectively drive the Earth's complex and dynamic climate systems.

7. (D) Establishment of protected areas
Biodiversity faces several severe threats primarily driven by human activities, including the fragmentation of natural habitats and the unsustainable exploitation of various species. The introduction of invasive alien species also disrupts local ecosystems by outcompeting native flora and fauna. In contrast, the establishment of protected areas like national parks and wildlife sanctuaries is a conservation strategy designed to safeguard habitats, promote species recovery, and preserve the ecological integrity of regions.

8. (A) Both A and R are true and R is the correct explanation of A.
Environmental issues have evolved into global concerns because the consequences of ecological

Click Here to Buy book on Amazon

Biomagnification is the process by which certain persistent pollutants, such as heavy metals or some pesticides, become increasingly concentrated in the tissues of organisms at higher trophic levels in a food chain. This occurs because these substances are not easily broken down or excreted and are passed from prey to predator. Consequently, top predators can accumulate dangerously high levels of these toxins, even if the initial concentration in the environment was low. This phenomenon highlights the long-term ecological risks associated with persistent environmental contaminants.

52. (D) The design of work environments to fit the capabilities and limitations of employees.
Ergonomics is the scientific discipline concerned with designing tools, workstations, and tasks to fit the physical and cognitive abilities of workers. Its primary goal is to enhance comfort, safety, and productivity while reducing the risk of work-related musculoskeletal disorders and fatigue. By optimizing the interaction between the worker and their environment, ergonomics helps prevent injuries caused by repetitive motions, awkward postures, or excessive force. Implementing ergonomic principles is a proactive approach to improving occupational health and overall workplace efficiency.

53. (C) The cause, magnitude of impact, and area of effect.
Industrial disasters are significant events that cause extensive damage to human life, property, and the environment. They are typically classified based on several key factors, including their underlying cause, such as technical failure or human error, the magnitude of the impact, and the geographical area affected. Understanding these classifications is essential for emergency planning, risk assessment, and developing effective response and recovery strategies. By analyzing the characteristics of past disasters, organizations and governments can improve safety regulations and prevention measures.

54. (B) Job Safety Analysis
Job Safety Analysis, or JSA, is a proactive safety management tool used to identify and control hazards associated with specific tasks. The process involves breaking a job down into its individual steps, identifying potential risks at each step, and determining the most effective control measures to minimize those risks. By involving workers in the analysis, JSAs promote a better understanding of safe work practices and help to build a strong safety culture within the organization. They are essential for preventing workplace accidents.

55. (C) I, II and III only
Climate resilience involves the ability of a system to withstand, adapt to, and recover quickly from hazardous climate events. Key indicators of this capacity include the speed of recovery and the integrity of essential services following a disturbance. The hydrological cycle is also a fundamental component in understanding the complexities of climate systems and water availability. In contrast, Thornthwaite's climate classification is based on moisture indices and potential evapotranspiration rather than just wind patterns, providing a more comprehensive view of climatic zones.

56. (A) Providing a structured examination of the workplace safety management system.
A safety audit is a comprehensive and systematic evaluation designed to assess the effectiveness of an organization's overall safety management system. Unlike a simple inspection, an audit examines safety policies, procedures, and documentation to ensure compliance with legal standards and industry best practices. The goal is to identify systemic weaknesses, verify that safety controls are functioning as intended, and provide recommendations for continuous improvement. By conducting regular audits, companies can proactively manage risks and maintain a high standard of workplace health and safety.

57. (C) A chain of events involving both unsafe acts and unsafe conditions.
According to modern accident causation models, accidents are rarely the result of a single, isolated factor. Instead, they typically occur through a complex chain of events that includes both unsafe acts by individuals and unsafe physical conditions in the environment. For example, a worker might fail to wear safety gear while working on a poorly maintained platform. Identifying and addressing both the behavioral and environmental factors is essential for effective accident prevention and for

NODIA

cannot be recycled and is lost at each step, the base must always contain the most energy.

16. (B) Climate Resilience
Climate resilience refers to the ability of social, economic, and environmental systems to withstand and recover from climate-related shocks and disturbances. This concept involves both the capacity to absorb immediate impacts and the ability to adapt to long-term changes. Building resilience is essential for minimizing the risks associated with extreme weather events, such as floods and droughts. It requires integrated strategies that strengthen infrastructure, protect natural ecosystems, and enhance the adaptive capacity of communities to future hazards.

17. (B) Habitat destruction and fragmentation
The loss and fragmentation of natural habitats are the primary drivers of biodiversity decline worldwide. When large, continuous areas of land are broken into smaller, isolated patches, many species lose the resources and space they need to thrive. This disruption can lead to population declines and eventual extinction. Protecting diverse ecosystems and maintaining connectivity between habitats are crucial steps in conservation efforts. Addressing these threats is vital for preserving the delicate ecological balance and the services that nature provides.

18. (A) An increase in the amount of harmful ultraviolet radiation reaching Earth.
The ozone layer in the stratosphere serves as a protective shield that absorbs most of the sun's high-frequency ultraviolet radiation. Depletion of this layer, primarily caused by man-made chemicals like chlorofluorocarbons, allows more harmful rays to reach the Earth's surface. This increase in radiation can lead to serious health issues, including skin cancer and eye damage, and can harm marine life and agricultural crops. Protecting the ozone layer is therefore critical for safeguarding global environmental and human health.

19. (C) The Energy Flow Cycle
Biogeochemical cycles involve the continuous movement and recycling of essential chemical elements, such as carbon, nitrogen, and water, through both living organisms and the non-living environment. These cycles are essential for maintaining the availability of nutrients in an ecosystem. In contrast, energy does not cycle; it flows in a single direction from the sun through various trophic levels and is eventually lost as heat. Therefore, while nutrients are recycled, the flow of energy is a unidirectional process.

20. (C) II, III, IV and V only
Ecosystems are found in both aquatic and terrestrial environments and are characterized by functional processes like energy flow and nutrient cycling. Biogeochemical cycles involve interactions between biotic and abiotic components. Furthermore, while a habitat is the physical space where a species lives and can be shared, an ecological niche is the specific role a species plays and is unique to that species. An ecological niche is defined by much more than just the physical location of an organism.

21. (C) A food chain
A food chain represents the linear sequence of organisms through which energy and nutrients are transferred as one organism eats another. It typically starts with a primary producer, such as a plant, and proceeds through various consumers, including herbivores and carnivores. Each link in the chain occupies a specific trophic level. Understanding food chains is essential for studying the structure of ecosystems and how the loss of a single species can disrupt the entire flow of energy within a community.

22. (B) Utilizing and managing ecosystems to reduce disaster risk.
Ecosystem-based Disaster Risk Reduction, or EcoDRR, focuses on the sustainable management and restoration of natural ecosystems to protect communities from environmental hazards. By leveraging the natural buffering capacity of features like wetlands, forests, and mangroves, this approach reduces the impact of events such as floods, landslides, and storm surges. EcoDRR provides a cost-effective and resilient alternative or complement to traditional engineering solutions. It emphasizes that healthy ecosystems are fundamental to increasing social and ecological resilience against disasters.

23. (D) Industrial emissions
Industrial activities are a major source of atmospheric contaminants, releasing a variety

Downloaded from www.pdf.tube

damage are not confined to the borders of a single nation. Phenomena such as global warming, ozone layer depletion, and transboundary water pollution affect the entire planet. Because these challenges are interconnected, they require international cooperation and global strategies. The widespread impact of environmental degradation necessitates a unified approach to ensure the long-term sustainability of the Earth's natural systems.

9. (C) A community of living organisms interacting with their physical environment.
An ecosystem is the fundamental functional unit of ecology, comprising a community of living organisms such as plants, animals, and microbes. These biotic components interact continuously with their abiotic environment, which includes factors like sunlight, soil, water, and air. These complex interactions facilitate the flow of energy and the cycling of nutrients, maintaining the balance of life. Ecosystems can vary greatly in size and type, ranging from small ponds to vast forests.

10. (A) The organism's functional role and position in its ecosystem.
The concept of an ecological niche extends beyond the physical location an organism occupies. It encompasses the species' entire way of life, including its dietary habits, reproductive patterns, and interactions with other organisms. By defining how a species obtains resources and contributes to the ecosystem, the niche describes its unique functional role. Understanding this role is crucial for studying community structure, as it explains how different species coexist within the same habitat without direct competition.

11. (D) Fossil fuels
Fossil fuels, including coal, oil, and natural gas, are classified as non-renewable resources because they take millions of years to form from organic matter. Once these reserves are consumed, they cannot be replaced within a timeframe relevant to human society. In contrast, energy sources such as geothermal, biomass, and hydropower are considered renewable because they are naturally replenished. The finite nature of fossil fuels highlights the urgent need for sustainable energy alternatives worldwide.

12. (B) Autecology
Autecology is a specific branch of ecology that focuses on the study of an individual species and its relationship with the environment. This field examines how a particular organism adapts to its surroundings and how various environmental factors influence its growth, reproduction, and survival. It contrasts with synecology, which investigates the interactions within entire communities of different species. By understanding the autecology of a species, researchers can better predict its response to environmental changes.

13. (C) A network of interconnected food chains in an ecological community.
A food web provides a comprehensive and realistic representation of the feeding relationships within an ecosystem. Unlike a simple, linear food chain, a food web consists of multiple interconnected pathways through which energy and nutrients flow. Most organisms consume more than one type of prey and are eaten by several different predators. This complex network illustrates the stability and interdependence of the community, showing how a change in one population can affect many others.

NODIA

14. (A) P-3, Q-4, R-2, S-1
Ecosystems consist of various components with distinct roles. Producers, or autotrophs, generate their own food using sunlight. Decomposers, such as fungi and bacteria, break down dead organic matter, recycling nutrients back into the environment. Abiotic components include non-living factors like water and soil that provide the physical framework for life. Primary consumers are herbivores that feed directly on producers. Mapping these relationships is essential for understanding the structural and functional organization of any natural habitat.

15. (A) Energy is lost as heat at each successive trophic level.
In every ecosystem, the pyramid of energy is always upright because energy transfer between trophic levels is inherently inefficient. As energy moves from producers to primary consumers and then to higher-level predators, a significant portion is dissipated as heat through metabolic processes. Typically, only about ten percent of the energy is passed to the next level. Since energy

temperature of water bodies, harming aquatic life. Soil pollution is often caused by the excessive application of chemical pesticides in agriculture. While many pollutants are man-made, some can originate from natural sources. Furthermore, pollution management encompasses a broad range of activities beyond just cleanup, including prevention, monitoring, and the implementation of sustainable technologies to reduce environmental impact.

31. (A) The amount of incoming solar radiation received at the Earth's surface.
Insolation is a measure of the solar energy that reaches a specific area of the Earth's surface over a given period. It is the primary driver of the planet's weather and climate, as it heats the atmosphere, oceans, and land. The amount of insolation received depends on several factors, including the angle of the sun, the duration of daylight, and atmospheric conditions like cloud cover. Understanding insolation patterns is essential for studying global temperature distribution and atmospheric circulation.

32. (B) To evaluate an employee's hearing ability.
In occupational health, an audiometric test is a vital screening tool used to assess an individual's hearing sensitivity across different frequencies. This test is particularly important for workers in high-noise environments, where prolonged exposure can lead to permanent hearing loss. By establishing a baseline and conducting regular follow-ups, employers can detect early signs of auditory damage and implement protective measures. Maintaining a hearing conservation program is essential for ensuring the long-term well-being and safety of employees in industrial settings.

33. (A) Both A and R are true and R is the correct explanation of A.
In most terrestrial ecosystems, the pyramid of biomass is upright, with producers having the largest total mass. However, in certain aquatic ecosystems, the pyramid can be inverted. This occurs because the primary producers, such as phytoplankton, have a very high rate of reproduction and turnover. Although their standing biomass at any given moment may be less than that of the herbivores that consume them, their rapid growth supports a larger mass of consumers. This dynamic illustrates the complexity of ecological structures.

34. (A) Solid precipitation.
Precipitation refers to any form of water that falls from the atmosphere to the Earth's surface. A hailstorm is a specific type of solid precipitation consisting of balls or irregular lumps of ice, known as hailstones. These form within strong thunderstorm clouds when updrafts carry water droplets into extremely cold layers of the atmosphere, where they freeze and accumulate more ice. Hail can cause significant damage to crops, vehicles, and buildings, making it a serious meteorological hazard in many regions.

35. (C) Accident investigation.
The Incident Recall Technique is a systematic method used during accident investigations to gather detailed information about an event from those who were present. It involves interviewing individuals and encouraging them to recall the sequence of events without using leading questions that might bias their responses. This technique is valuable for identifying contributing factors and root causes that might not be apparent from physical evidence alone. By accurately reconstructing incidents, organizations can develop more effective safety protocols and prevent future occurrences.

36. (D) A violation of a commonly accepted safe work procedure.
An unsafe act is a behavioral factor in accident causation where an individual deviates from established safety protocols or common safe practices. Examples include failing to use personal protective equipment, operating machinery at excessive speeds, or bypassing safety guards. These actions significantly increase the risk of workplace injuries and fatalities. Promoting a strong safety culture and providing comprehensive training are essential strategies for reducing unsafe acts and ensuring that all employees understand and follow the necessary procedures to stay safe.

37. (C) Ecological succession.
Community dynamics refers to the study of how the structure and composition of ecological communities change over time. A key characteristic of these dynamics is ecological

Click Here to Buy book on Amazon

succession, which is the process by which the types of species in an area change following a disturbance or the creation of new habitat. This process involves a sequence of stages, from pioneer species to a stable climax community. Understanding succession is vital for managing ecosystems and predicting how they will respond to environmental shifts or human impacts.

38. (B) Annual and monthly averages of temperature and precipitation.
The Koppen climate classification system is one of the most widely used methods for categorizing the world's diverse climates. It is primarily based on regional vegetation patterns, which are determined by monthly and annual averages of temperature and precipitation. By using a series of letters to represent different climate zones, such as tropical, dry, temperate, continental, and polar, this system provides a standardized way to describe and compare climatic conditions across the globe. It remains a fundamental tool in climatology and geography.

39. (B) P-3, Q-1, R-2, S-4
Different types of environmental pollution originate from various sources. Marine pollution is frequently caused by oil spills and plastic debris that harm oceanic ecosystems. Noise pollution primarily stems from industrial machinery and heavy traffic in urban areas. Thermal pollution is often the result of power plants releasing hot water used as a coolant back into natural water bodies. Soil pollution is commonly linked to the widespread use of agricultural pesticides. Understanding these sources is essential for developing effective strategies for environmental protection.

40. (A) Extreme weather events.
Heat waves and cold waves are examples of extreme weather events characterized by prolonged periods of temperature that are significantly above or below the historical average for a region. These events can have severe impacts on human health, causing conditions like heatstroke or hypothermia, and can also damage infrastructure, crops, and livestock. As global climate patterns shift, the frequency and intensity of these extreme events are increasing, necessitating improved preparedness and adaptation strategies to protect vulnerable populations and essential services.

NODIA

41. (C) To promote and maintain the health and safety of workers.
A safety committee is a collaborative group within an organization that brings together representatives from both management and the workforce to address health and safety issues. Its primary function is to foster a safe working environment by identifying hazards, reviewing accident reports, and recommending improvements to safety policies and practices. By promoting open communication and active participation, safety committees help to build a strong safety culture, reduce the risk of injuries, and ensure compliance with relevant occupational health and safety regulations.

42. (A) Natural and semi-natural landscapes.
Forest fires and wildfires are significant safety concerns that primarily affect natural and semi-natural landscapes, such as woodlands, grasslands, and shrublands. These fires can be triggered by natural causes like lightning or by human activities. They pose a threat to biodiversity, air quality, and the safety of nearby communities. Managing these risks involves a combination of prevention, early detection, and effective response strategies. Understanding the fire dynamics within these ecosystems is essential for protecting both the environment and human life.

43. (D) Mangrove forests protecting coastlines from storm surges.
Ecosystem services are the numerous benefits that natural environments provide to human society. In the context of disaster risk reduction, healthy ecosystems act as natural barriers against environmental hazards. A classic example is the role of mangrove forests in coastal areas, where their complex root systems dissipate the energy of waves and protect shorelines from storm surges and erosion. Utilizing such nature-based solutions is a core principle of EcoDRR, providing a sustainable and cost-effective way to enhance community resilience against natural disasters.

44. (C) Statement I is true but Statement II is false.
The Earth's heat budget describes the balance between the incoming solar radiation absorbed

by the planet and the outgoing terrestrial radiation emitted back into space. This equilibrium is essential for maintaining a stable global temperature. If there were a surplus of incoming energy compared to what is released, the Earth would experience global warming rather than cooling. Understanding this balance is fundamental to climatology, as even small disruptions can lead to significant changes in the planet's climate systems over time.

45. (C) I, IV and V only
Acid rain results from atmospheric pollutants like sulfur dioxide reacting with water vapor. Prolonged heat waves can lead to serious heat-related illnesses, making them a significant health concern. Additionally, atmospheric phenomena such as frost and fog pose risks to safety and agriculture. Global warming is considered a primary driver of broader climate change, not a separate phenomenon. Furthermore, ozone depletion is most severe over polar regions, rather than the equator. Understanding these connections is vital for effective environmental health management and disaster preparedness.

46. (D) A very dry environment.
Xerosere is a type of ecological succession that begins in an extremely dry habitat, such as a bare rock or a desert area. The process starts with pioneer species, often lichens or mosses, which are capable of surviving harsh conditions with very little water. These organisms gradually break down the substrate and accumulate organic matter, creating a thin layer of soil. This allows more complex plants like grasses, shrubs, and eventually trees to establish themselves, leading toward a stable climax community in the region.

47. (A) The chemical composition of individuals.
Population dynamics is a field of ecology that focuses on the study of how population sizes and compositions change over time. It investigates critical factors such as birth and death rates, migration patterns, and the age structure of a group. These elements help scientists understand how populations grow, fluctuate, and respond to environmental pressures. In contrast, the specific chemical composition of an individual organism is a matter of physiology or biochemistry rather than a primary focus of population-level ecological studies.

48. (B) Advocate for and implement ecosystem-based solutions for disaster risk reduction.
The Partnership for Environment and Disaster Risk Reduction, known as PEDRR, is a global alliance of organizations dedicated to promoting ecosystem-based approaches to disaster risk reduction. Its primary role is to advocate for the integration of environmental management into national and international disaster policies and plans. By sharing knowledge, providing technical support, and implementing field projects, PEDRR helps communities use their natural resources to build resilience against hazards. This approach emphasizes that healthy ecosystems are essential for sustainable development and long-term disaster prevention.

49. (B) A disease caused by occupational exposure that must be reported to relevant authorities by law.
A notifiable occupational disease is a specific medical condition caused by workplace exposure that must be legally reported to government health or safety authorities. Examples often include silicosis, lead poisoning, and certain types of cancer. Mandatory reporting allows authorities to track the prevalence of these diseases, identify hazardous work environments, and implement preventive measures to protect other workers. This legal requirement is a fundamental component of national occupational health surveillance and is essential for ensuring workplace safety and public health.

NODIA

50. (A) The adverse effects of chemicals encountered in the workplace on living organisms.
Industrial toxicology is a branch of toxicology that specifically examines the harmful effects of chemical substances used or produced in industrial settings on human health. This field involves studying how these chemicals enter the body, their mechanisms of action, and the resulting health consequences, whether acute or chronic. By identifying the risks associated with various workplace toxicants, industrial toxicologists help establish safe exposure limits and develop protective measures, such as personal protective equipment and ventilation, to ensure the safety of employees.

51. (C) Biomagnification

of pollutants such as sulfur dioxide, nitrogen oxides, and particulate matter. These emissions occur during manufacturing processes, power generation, and chemical production. When released into the air, these substances can lead to the formation of smog and acid rain, and they significantly contribute to respiratory problems and other health issues in humans. Regulating industrial output is a crucial step in reducing pollution and protecting global air quality.

24. (A) Energy cannot be created or destroyed, only transformed.
The first law of thermodynamics, often called the law of conservation of energy, states that the total energy in a closed system remains constant. In an ecosystem, this means that energy is never created from nothing nor does it disappear; it is simply transformed between different forms. For instance, plants convert solar energy into chemical energy through photosynthesis. This stored energy is then transferred as food to consumers, where it is transformed into mechanical energy for movement or heat.

25. (A) I, II, III, IV
The Earth's atmosphere is organized into distinct layers characterized by changes in temperature and composition. Starting from the surface, the troposphere is where most weather events occur. Above it lies the stratosphere, which contains the protective ozone layer. The mesosphere follows, where temperatures decrease with height, and finally, the thermosphere is the outermost layer, where temperatures rise significantly due to solar radiation. Understanding these layers is essential for studying atmospheric science, weather forecasting, and long-term climate patterns.

26. (A) Ecological succession that begins in an aquatic environment.
A hydrosere is a specific type of ecological succession that starts in a water body, such as a pond or lake. Over time, as organic matter and sediment accumulate, the water body gradually becomes shallower, allowing different types of plant communities to establish themselves. This process transitions through various stages, from submerged plants to floating vegetation and eventually to marshy and terrestrial communities. Ultimately, the hydrosere can lead to the formation of a stable, climax forest community in the area.

27. (D) A congenital health condition of an employee.
Occupational hazards are risks encountered in the workplace that can cause injury or illness to employees. These include physical hazards like excessive noise, chemical risks from lab exposure, and ergonomic issues like repetitive strain. In contrast, a congenital health condition is an inherited or developmental disorder present at birth and is not caused by workplace environments or activities. Differentiating between work-related hazards and pre-existing medical conditions is crucial for establishing proper workplace safety standards and determining employee compensation.

28. (B) A state of dynamic equilibrium within a community of organisms.
Ecological balance refers to a state of dynamic equilibrium where the populations of different species and their environment remain relatively stable over time. This balance is maintained through complex interactions such as predation, competition, and symbiosis, as well as the cycling of nutrients and energy. While natural disturbances can cause temporary shifts, healthy ecosystems have the resilience to return to this equilibrium. Maintaining this balance is essential for the long-term survival of all organisms and the health of the planet.

29. (A) Both Statement I and Statement II are true.
Population dynamics is the branch of life sciences that studies the structural and functional changes in populations, including factors like size, density, and age distribution. A key concept in this field is death antagonism, which refers to the various environmental pressures and competitive interactions that lead to mortality within a population. By analyzing these factors, scientists can better understand how populations fluctuate and interact with their surroundings. Both statements accurately reflect the fundamental principles of study within population ecology.

30. (B) II and III only
Environmental pollution involves the introduction of contaminants that degrade the quality of natural resources. Thermal pollution occurs when industrial processes alter the

Downloaded from www.pdf.tube

building a comprehensive safety culture within any organization.

58. (A) Both A and R are true and R is the correct explanation of A.
Strategic Environmental Assessment, or SEA, is a high-level tool used to integrate environmental and disaster risk considerations into the earliest stages of decision-making for policies, plans, and programs. By identifying potential risks and opportunities early on, SEA supports the implementation of ecosystem-based disaster risk reduction strategies. This approach ensures that development goals are aligned with environmental sustainability and community resilience. The link between SEA and EcoDRR is fundamental to creating robust frameworks that protect both people and the natural systems they depend on.

59. (D) Both direct costs and indirect/hidden costs.
The true cost of a workplace accident extends far beyond the immediate, direct expenses such as medical bills and workers' compensation payments. It also includes significant indirect or hidden costs, such as lost productivity, time spent on investigations, damage to equipment, and the negative impact on employee morale and company reputation. In many cases, these indirect costs can be much higher than the direct ones. Understanding the full economic impact of accidents is a powerful motivator for organizations to invest in safety.

60. (B) Secondary or cascading disaster.
A secondary or cascading disaster occurs when one hazardous event triggers a subsequent one. A classic example is a fire following an earthquake, where seismic vibrations rupture gas lines or cause electrical shorts, igniting blazes. These secondary events can often cause more damage than the initial hazard, especially if infrastructure like water mains is also destroyed, making firefighting efforts more difficult. Comprehensive disaster management plans must account for these complex interactions to ensure that communities are prepared for both primary and secondary risks.

61. (C) Carcinogenicity
Carcinogenicity refers to the ability of a substance, organism, or radiation to cause cancer in living tissues. In industrial toxicology, identifying carcinogens is a critical task for ensuring worker safety, as exposure to these agents can lead to long-term health consequences that may not appear for many years. Regulating these substances involves establishing strict exposure limits and requiring the use of protective measures. Understanding the mechanisms through which carcinogens interact with human cells is essential for developing effective prevention and health monitoring strategies.

NODIA

62. (D) The large-scale movement of air across the globe.
General atmospheric circulation is the global-scale system of air movement that distributes heat and moisture around the Earth. Driven primarily by the unequal heating of the planet by the sun, this circulation consists of major wind belts and pressure systems, such as the trade winds and jet streams. It plays a fundamental role in determining the world's climate patterns and weather systems. Understanding this large-scale motion is essential for meteorologists and climatologists to predict long-term atmospheric trends and seasonal changes.

63. (A) A community-based, eco-based approach.
Traditional environmental wisdom refers to the accumulated knowledge and practices that local and indigenous communities have developed over generations to live sustainably with their environment. In disaster management, this knowledge can be used to predict weather patterns, identify safe areas, and manage natural resources effectively. This approach is community-based and eco-based, as it relies on deep local understanding of ecological systems. Integrating such traditional wisdom into modern disaster strategies can enhance resilience and provide culturally appropriate solutions to environmental hazards.

64. (C) P-3, Q-1, R-4, S-2
Occupational health involves several key disciplines. Industrial toxicology studies the harmful effects of workplace chemicals, while ergonomics focuses on designing jobs to fit the worker's physical and mental capabilities. Work-related musculoskeletal disorders are often the result of repetitive motions or poor posture on the job. Carcinogens are specific agents known

to cause cancer. By integrating these concepts, organizations can develop comprehensive health and safety programs that protect employees from a wide range of work-related risks and promote long-term well-being.

65. (B) Market price of ecosystem goods
An ecosystem's structure is defined by its physical and biological components, which include abiotic materials like water and soil, and biotic members such as producers and consumers. These elements collectively form the framework within which ecological processes occur. While humans may assign a market price to ecosystem goods like timber or clean water, this economic value is an external human construct and is not a fundamental structural component of the natural system itself. Understanding the actual structural elements is essential for studying ecological functions.

66. (A) A survey is broader and assesses the overall safety culture, while an inspection is focused on specific compliance issues.
While both are important tools for workplace safety, a safety survey and a safety inspection differ in their scope and objectives. An inspection is typically a focused check for specific hazards or non-compliance with safety standards and regulations. In contrast, a safety survey is a broader assessment that examines the overall safety culture, management attitudes, and employee perceptions within an organization. By combining both approaches, companies can address immediate physical risks while also identifying underlying systemic issues that influence safety performance.

67. (C) People, Parts, Position, and Paper.
During an accident investigation, professionals systematically gather four primary types of evidence often summarized as the four 'Ps'. This includes information from people through witness statements, physical parts of machinery or equipment involved, the exact position of items at the scene, and paper evidence such as maintenance logs or training records. Collecting a diverse range of evidence is essential for accurately reconstructing the event and identifying all the contributing factors and root causes that led to the accident.

68. (D) Using properties of natural ecosystems to address societal challenges like disaster risk.
Nature-based solutions, or NBS, involve working with and through natural systems to address a variety of societal challenges, including disaster risk and climate change. Rather than relying solely on traditional engineering, NBS leverages the natural functions of ecosystems—such as the water absorption of wetlands or the soil stabilization of forests—to provide protection and other benefits. This approach is sustainable, cost-effective, and provides multiple co-benefits for biodiversity and human well-being. NBS is a key strategy for building resilient and sustainable communities.

69. (C) The pH level of soil and water bodies.
Acid rain is caused by emissions of sulfur dioxide and nitrogen oxides reacting with water in the atmosphere. When this acidic precipitation reaches the ground, it can significantly lower the pH levels of soil and water bodies. This change in acidity can harm or even kill aquatic life and damage sensitive plants and forest ecosystems. It also leaches essential nutrients from the soil, making it harder for vegetation to grow. Addressing the sources of these emissions is vital for ecological protection.

70. (B) I, III and IV only
Occupational hazards are categorized into physical, chemical, and biological types. Legally required reports of notifiable occupational diseases allow authorities to monitor workplace health trends effectively. Industrial toxicology also plays a vital role by studying the various long-term and systemic effects of workplace chemicals. In contrast, ergonomics is primarily concerned with designing the work environment to fit the worker, not just providing protective equipment. Furthermore, agricultural respiratory hazards remain a significant health issue that requires focused attention and preventive measures.

71. (D) Adverse effects on organ systems distant from the toxicant's entry point.
In industrial toxicology, a systemic effect occurs when a chemical enters the body and travels through the bloodstream to affect organs or systems far from the initial point of contact. For example, inhaling certain solvent vapors might cause damage to the liver or the central nervous

Click Here to Buy book on Amazon

system. This differs from a local effect, which is confined to the specific site of exposure, such as a skin rash. Understanding systemic toxicity is crucial for establishing safe exposure limits and protective protocols in the workplace.

72. (A) Identify the weaknesses and susceptibilities of a community or system to a hazard.
A vulnerability assessment is a key component of disaster risk management that aims to identify the specific weaknesses and susceptibilities of a community, system, or asset to various hazards. This process involves evaluating factors such as building quality, infrastructure integrity, social conditions, and geographic location. By understanding what makes a community vulnerable, planners can develop targeted strategies to strengthen resilience and reduce potential impacts. It is a proactive step that moves beyond predicting hazards to addressing the root causes of risk.

73. (C) Poor indoor air quality and ergonomic issues.
While office environments may seem relatively safe compared to industrial sites, they present their own unique set of hazards. These commonly include poor indoor air quality, which can lead to respiratory discomfort and 'sick building syndrome', and ergonomic issues arising from improperly designed workstations and prolonged computer use. These hazards can cause chronic health problems like repetitive strain injuries and back pain over time. Addressing these issues through proper ventilation and ergonomic assessments is essential for maintaining the health and productivity of office workers.

74. (A) Quantify the number of safety defects or unsafe behaviours in a specific area at a specific time.
Safety sampling is a systematic technique used to provide a snapshot of the safety level in a particular workplace at a specific moment. It involves making a series of random observations to record the number of safe and unsafe acts or conditions. By quantifying these findings, managers can identify trends, assess the effectiveness of safety programs, and determine where additional training or interventions are needed. This proactive approach helps to drive continuous improvement in safety performance and build a more hazard-aware workforce.

NODIA

75. (B) II, I, III, IV
A logical accident investigation begins with an immediate response to secure the scene and ensure the safety of all individuals involved. Once the area is safe, the process moves to systematically gathering evidence, including information from people and documentation. This is followed by a thorough analysis of the data to identify the root causes of the event. Finally, a comprehensive report is written, and recommendations for corrective actions are made to prevent similar incidents from occurring in the future.

76. (B) Geological diversity
Biodiversity is typically understood at three fundamental levels: genetic diversity within species, species diversity within a community, and ecosystem diversity across a landscape. These levels represent the variety of life on Earth and the ecological systems they form. While geological diversity refers to the variety of rocks, minerals, and landforms, it is a separate concept from the biological variety of life. Each level of biodiversity is interconnected and essential for maintaining the health and resilience of the natural world and the services it provides.

77. (C) Tools for documentation, measurement, and evidence collection.
An investigator's kit is a specialized set of equipment designed to help professionals systematically document and analyze an accident scene. It typically contains items such as cameras for visual recording, measuring tapes for recording positions, sample containers for physical evidence, and notebooks for recording witness statements. Having these tools readily available ensures that investigators can capture critical information accurately and efficiently before the scene is altered. Proper evidence collection is essential for identifying root causes and developing effective prevention strategies to improve workplace safety.

78. (D) Release of chlorofluorocarbons (CFCs) into the atmosphere.
The depletion of the stratospheric ozone layer is primarily caused by the release of man-made chemicals known as chlorofluorocarbons, or CFCs. These substances, once widely used in refrigeration, aerosol sprays, and industrial

cleaning, break down in the upper atmosphere and release chlorine atoms. These atoms then react with and destroy ozone molecules, thinning the protective layer that shields the Earth from harmful ultraviolet radiation. International efforts like the Montreal Protocol have been successful in phasing out the production of these ozone-depleting substances.

79. (A) Both Statement I and Statement II are true.
Cardio Pulmonary Resuscitation, or CPR, is a critical emergency procedure used as part of first aid when a person's heartbeat or breathing has stopped. In the workplace, having trained staff who can perform this technique is essential for managing medical emergencies. Additionally, routine health screenings, which include eye tests and vital function assessments like blood pressure monitoring, are fundamental to occupational health programs. These proactive measures help in the early detection of work-related health issues and ensure that employees remain fit for their duties.

80. (A) I and III only
An unsafe condition is a physical hazard within the workplace that can lead to an accident. Furthermore, a reportable accident is one that meets specific legal or regulatory criteria, requiring notification to relevant authorities. While techniques like Incident Recall are used to gather human testimony, the primary purpose of an investigation is to find systemic root causes and prevent recurrence, not to blame individuals. Understanding these distinctions is fundamental for developing a proactive safety management system that prioritizes prevention over punishment.

81. (B) Troposphere
The troposphere is the lowest layer of the Earth's atmosphere and is where the vast majority of weather phenomena occur. This layer contains most of the atmosphere's mass and almost all of its water vapor and aerosols. As air rises and cools in the troposphere, clouds form and precipitation occurs, driven by solar heating and the Earth's rotation. Understanding the dynamics of this layer is essential for weather forecasting and studying the daily atmospheric changes that affect life on Earth.

82. (A) Costs of prevention, control, and remediation of pollution.
Pollution management encompasses a wide range of economic activities and expenditures required to protect the environment. This includes the costs of prevention strategies designed to reduce the initial generation of pollutants, control technologies like filters and scrubbers used to manage emissions, and remediation efforts to clean up contaminated sites. While fines and equipment costs are parts of the whole, the full scope of management also involves monitoring and administration. This comprehensive approach is essential for ensuring long-term environmental sustainability and protecting public health.

83. (A) Both A and R are true and R is the correct explanation of A.
Energy transfer between trophic levels in an ecosystem is inherently inefficient, with only a small fraction of energy passed from one level to the next. This phenomenon is explained by the Second Law of Thermodynamics, which states that every time energy is transformed, some portion is dissipated as heat. Consequently, as energy moves from producers up through consumers, the total available energy decreases significantly. This inefficiency dictates the structure of ecological pyramids and limits the number of trophic levels a system can support.

84. (D) The factors and interactions that contribute to the mortality rate of a population.
In the field of population dynamics, death antagonism refers to the various environmental factors and inter-species or intra-species interactions that lead to the mortality of individuals. These can include predation, disease, competition for resources, and extreme climatic events. By studying these antagonistic forces, ecologists can understand the factors that limit population growth and influence the overall stability and health of a community. This concept is fundamental for predicting how populations will fluctuate in response to changing environmental conditions or human activities.

85. (C) Increasing green spaces and tree cover.
Nature-based solutions for managing urban heat involve using the natural cooling properties of vegetation to reduce temperatures in

Downloaded from www.pdf.tube

cities. Increasing green spaces and tree cover provides shade and facilitates cooling through evapotranspiration, which can significantly lower the local temperature. This approach is more sustainable and provides more co-benefits, such as improved air quality and increased biodiversity, compared to solely relying on mechanical cooling systems like air conditioning. Incorporating such green infrastructure is essential for creating more resilient and liveable urban environments.

86. (B) Chronic effect
A chronic health effect is a medical condition that develops slowly over a long period, typically as a result of repeated or continuous exposure to a hazard in the workplace. Unlike acute effects, which appear immediately after exposure, chronic conditions like silicosis or certain cancers may have a long latency period before symptoms become evident. Identifying and preventing these long-term risks is a primary goal of occupational health programs, which rely on health surveillance and the establishment of safe exposure limits to protect workers.

87. (D) Organize the investigation plan and assign tasks.
A planning matrix is a vital organizational tool used during an accident investigation to structure the entire process effectively. It helps the investigation team to identify all the necessary tasks, determine the required resources, and assign specific responsibilities to team members. By establishing a clear plan and timeline, the matrix ensures that the investigation is thorough, systematic, and completed in a timely manner. This organized approach is essential for accurately gathering evidence, identifying root causes, and developing effective recommendations to prevent future incidents.

88. (A) A critical period of high temperature stress during crop growth.
In the context of agriculture, terminal heat refers to an extreme temperature event that occurs during the later stages of a crop's growth, particularly during reproductive phases like flowering or grain filling. This heat stress can significantly reduce crop yields and quality by accelerating the maturation process and hindering the accumulation of starch or other nutrients. Understanding and mitigating the impacts of terminal heat is a major challenge for food security, especially as global temperatures continue to rise due to climate change.

89. (B) P-3, Q-4, R-2, S-1
Modern disaster risk reduction involves several integrated strategies. EcoDRR specifically focuses on using ecosystem services to reduce risk, while Nature-Based Solutions provide broader environmental answers to various societal challenges. Strategic Environmental Assessment ensures that environmental considerations are built into the highest levels of policy and planning. Platforms like PEDRR bring together multiple stakeholders to promote these environmentally focused approaches. Together, these concepts form a comprehensive framework for building resilience by leveraging the natural functions and sustainable management of the Earth's ecosystems.

90. (A) It involves the movement of chemical elements through both biotic and abiotic parts of an ecosystem.
A biogeochemical cycle is defined by the continuous movement and recycling of chemical elements, such as carbon, nitrogen, and phosphorus, through the different components of an ecosystem. This includes both the living organisms—the biotic part—and the non-living environment, such as the atmosphere, soil, and water—the abiotic part. These cycles are essential for maintaining life, as they ensure that the necessary nutrients are constantly available for use by plants and animals. Understanding these cycles is fundamental to studying ecosystem health and stability.

91. (D) Increase in the average temperature of the Earth's climate system.
Global warming refers to the long-term increase in the average temperature of the Earth's climate system, primarily driven by the accumulation of greenhouse gases in the atmosphere. This rise in temperature leads to various widespread effects, including the melting of polar ice caps, rising sea levels, and changes in precipitation patterns. It is a critical aspect of the broader phenomenon of climate change, affecting ecosystems, agriculture, and human health worldwide. Addressing global warming requires international efforts to reduce

NODIA

circulation, weather systems, and the world's diverse climate zones.

119. (D) Specific hazards and non-compliance with safety standards.
A safety inspection is a focused and practical tool used to identify immediate physical hazards and ensure that the workplace complies with established safety standards and regulations. During an inspection, professionals examine machinery, equipment, and environment to find issues like blocked exits, damaged guards, or improper chemical storage. By identifying and addressing these specific problems, companies can prevent accidents and maintain a safe environment for their employees. Regular inspections are a critical component of any proactive occupational health and safety management program.

120. (A) I and III only
An unsafe act occurs when an individual deviates from established safety procedures, while the cost of an accident encompasses both direct and significant indirect or hidden expenses. Modern safety science recognizes that accidents are usually caused by a complex combination of factors rather than a single event. Tools like Job Safety Analysis are proactive measures used before a task begins. Furthermore, safety committees play a vital role in promoting safety.

121. (C) The protection, preservation, management, or restoration of wildlife and natural resources.
Biodiversity conservation involves a range of strategies aimed at protecting and managing the variety of life on Earth. This includes preserving natural habitats, managing species populations, and restoring ecosystems that have been degraded. The goal is to maintain the health and resilience of the natural world and ensure that the essential services ecosystems provide are available for future generations. Conservation efforts are vital for addressing the global biodiversity crisis and for promoting sustainable development that balances human needs with environmental protection.

122. (D) Profit-margin related
Industrial disasters are significant events that cause extensive damage to human life, property, and the environment. They are typically classified based on their underlying cause, such as technical failure, human error, or natural events that trigger technological failures. Understanding these classifications is essential for risk assessment and for developing effective prevention and response strategies. While economic factors may influence safety investment, 'profit-margin' is not a formal category used to classify the technical or environmental nature of an industrial disaster or its immediate cause.

123. (D) Describing the event, determining causes, and recommending corrective actions for prevention.
The final report of an accident investigation is a critical document designed to summarize the entire process and provide clear findings. Its primary purpose is to describe the event in detail, identify the underlying root causes, and recommend specific corrective actions to prevent similar incidents in the future. By focusing on learning and prevention rather than blame, the report helps organizations to improve their safety systems and protect their employees. It is an essential tool for continuous improvement in workplace health and safety.

124. (B) Anthropogenic (human) activities.
While some pollution can originate from natural sources like volcanic eruptions, the overwhelming majority of environmental degradation is driven by human activities. These anthropogenic sources include industrial emissions, agricultural runoff, improper waste disposal, and the burning of fossil fuels for transportation and energy. These activities have introduced large quantities of pollutants into the atmosphere, water bodies, and soil, leading to significant impacts on human health and global ecosystems. Addressing the root causes of human-driven pollution is essential for long-term environmental sustainability.

125. (B) III, I, II, IV
In an industrial toxicology process, the sequence typically begins with an employee's exposure to a toxic substance in the workplace. Once exposed, the toxicant may be absorbed into the body through routes like inhalation or skin contact. Following absorption, the substance is distributed via the bloodstream to various organ systems. If exposure is repeated or prolonged, it can eventually lead to the manifestation of chronic health effects. Understanding this progression

Click Here to Buy book on Amazon

population health, predict future trends, and develop effective management and conservation strategies.

99. (C) Before a fire to ensure an effective response.
In the context of fire safety, preparedness refers to the range of activities undertaken before a fire occurs to ensure that an effective and rapid response is possible. This includes developing emergency plans, conducting regular fire drills, training personnel, and maintaining firefighting equipment. By being prepared, organizations can minimize the risk to life and property and improve their ability to recover from a fire event. Preparedness is a proactive phase of disaster management that is essential for building resilient and safe communities.

100. (D) The promotion and maintenance of physical, mental, and social well-being of workers.
Occupational health is a comprehensive field that goes beyond the treatment of physical injuries. It encompasses the promotion and maintenance of the highest degree of physical, mental, and social well-being for workers in all occupations. This includes preventing work-related health problems, protecting employees from risks, and adapting the work environment to their physiological and psychological needs. By focusing on the whole person, occupational health services aim to create a safe and healthy workplace that supports the long-term health and productivity of the workforce.

101. (C) Absorption
Absorption is the critical process through which harmful substances, such as carcinogens, enter the human body and reach the bloodstream. In an industrial context, this primarily occurs through three main routes: inhalation into the lungs, ingestion through the mouth, or penetration through the skin. Once absorbed, these substances can be distributed to various organs, where they may cause damage. Understanding the routes of absorption is essential for developing effective protective measures, such as proper ventilation and personal protective equipment, for workers.

102. (B) Exposure to farmer's lung disease from moldy hay.
Agricultural respiratory hazards are a significant health concern for those working in farming. A primary example is farmer's lung, an allergic condition caused by inhaling dust from moldy hay, straw, or grain. The spores from the mold trigger an inflammatory response in the lungs, which can lead to chronic respiratory problems if exposure continues. Preventing such diseases involves improving ventilation in storage areas and using appropriate respiratory protection. This highlights the importance of recognizing and managing biological hazards in the agricultural sector.

103. (D) A physical or environmental hazard in the workplace, such as a slippery floor.
An unsafe condition refers to any physical or environmental factor in the workplace that increases the risk of an accident or injury. Examples include poorly maintained machinery, inadequate lighting, cluttered walkways, or slippery floors. Unlike unsafe acts, which are behavioral, unsafe conditions are inherent to the physical work environment. Identifying and correcting these hazards through regular inspections and maintenance is a fundamental responsibility of management and is essential for creating a safe and healthy workplace for all employees.

104. (A) Both Statement I and Statement II are true.
Climatology uses various systems to categorize the Earth's climates. The Koppen system is widely recognized for its use of alphabetical letters to denote major climate zones based on temperature and precipitation. In contrast, the Thornthwaite scheme offers a more complex approach by incorporating potential evapotranspiration and moisture indices. Both systems provide valuable frameworks for scientists to describe and compare climatic conditions across the globe. Understanding these different methodologies is essential for studying global environmental patterns and the impacts of long-term climate change.

105. (B) II and IV only
The Earth's atmosphere is organized into distinct layers, with the troposphere being the layer closest to the surface. Above the troposphere lies the stratosphere, which contains the ozone layer that protects life by absorbing harmful ultraviolet radiation. While nitrogen and oxygen are the primary gases, nitrogen is the most abundant.

Downloaded from www.pdf.tube

Furthermore, atmospheric pressure actually decreases as altitude increases because there is less air above. Understanding these structural and compositional characteristics is fundamental to atmospheric science, weather prediction, and environmental protection efforts.

106. (A) To detect potential health problems at an early stage.
Occupational health screening is a proactive medical process used to monitor the health of workers and identify potential issues before they become serious. By detecting early signs of work-related illnesses or pre-existing conditions that could be aggravated by specific tasks, employers can implement protective measures or adjust work duties. This process is essential for protecting the long-term well-being of the workforce and ensuring that employees are physically fit for their roles. It forms a core component of comprehensive occupational health programs worldwide.

107. (D) Integrated ecosystem management.
Integrated ecosystem management is a fundamental tool for implementing Ecosystem-based Disaster Risk Reduction. This approach involves managing land, water, and living resources in a way that promotes conservation and sustainable use while also reducing the impact of natural hazards. By considering the entire ecosystem and the services it provides, planners can develop more resilient and effective strategies for disaster prevention and recovery. This integrated perspective is essential for balancing human needs with the protection of the natural environments that buffer against disasters.

108. (A) Both A and R are true and R is the correct explanation of A.
Work-Related Musculoskeletal Disorders are a major health concern across many industries, often leading to pain and long-term disability for workers. These conditions are frequently caused by poor workstation design and repetitive tasks, which put excessive strain on the body. Ergonomics addresses these issues by designing work environments and tasks to fit the capabilities of the worker. By applying ergonomic principles, organizations can significantly reduce the risk factors for these disorders, thereby promoting better health, comfort, and productivity among their employees.

109. (C) Surveillance of the work environment and workers' health, and providing advice.
Occupational health services are dedicated to ensuring a safe and healthy workplace through a variety of core activities. This includes the regular surveillance of the work environment to identify potential hazards and the monitoring of workers' health to detect any early signs of illness. These services also provide expert advice to both employers and employees on how to improve safety practices and maintain well-being. By focusing on prevention and proactive management, occupational health services play a vital role in protecting the workforce.

110. (D) Results from the build-up of the substance in the body over multiple exposures.
In industrial toxicology, a cumulative effect occurs when a toxic substance builds up in the body over time because it is absorbed faster than it can be metabolized or excreted. This gradual accumulation can eventually lead to adverse health consequences, even if each individual exposure was below the threshold for immediate harm. Understanding cumulative toxicity is essential for establishing long-term occupational exposure limits and for designing health monitoring programs to protect workers who are repeatedly exposed to certain chemicals or materials.

111. (A) Pre-defined criteria set by legal or organizational standards.
The distinction between a reportable and a non-reportable accident is based on specific, pre-defined criteria established by law or organizational policy. These criteria typically include factors such as the severity of the injury, the duration of absence from work, or the extent of property damage. Reportable accidents must be notified to government authorities for monitoring and investigative purposes. Following these standardized guidelines ensures that all significant safety incidents are properly documented, analyzed, and used to improve overall workplace health and safety protocols.

112. (B) Management has a responsibility for safety.

NODIA

A fundamental principle of accident prevention is that management bears the primary responsibility for ensuring a safe and healthy workplace. This involves providing adequate training, maintaining equipment, and fostering a strong safety culture where all employees understand and follow safety protocols. While workers also play a role in their own safety, leadership's commitment to prioritizing safety is the most critical factor in reducing workplace injuries. By accepting this responsibility, management can effectively identify and mitigate hazards before they lead to accidents or illnesses.

113. (B) Increased incidence of heat-related illnesses during a heatwave.
Climate variability and extreme weather events have direct and significant impacts on population health. For example, during a heatwave, the prolonged exposure to high temperatures can lead to a surge in heat-related illnesses, such as heat exhaustion and heatstroke, which can be fatal. These risks are particularly high for vulnerable groups like the elderly and children. As global weather patterns become more unpredictable, developing public health strategies to manage the consequences of temperature extremes and other climate-related hazards is increasingly important.

114. (A) P-3, Q-2, R-1, S-4
Various atmospheric events are defined by specific characteristics. A heat wave is a prolonged period of excessively hot weather, while frost involves the formation of ice crystals on surfaces as temperatures drop below freezing. Fog consists of tiny water droplets suspended near the ground, reducing visibility. Hailstorms produce precipitation in the form of irregular ice lumps. Understanding these different phenomena is essential for predicting their impacts on agriculture, infrastructure, and public safety, and for developing appropriate preparedness and response strategies.

115. (C) Provide a legal and historical account for analysis and prevention efforts.
Maintaining accurate records of workplace accidents is a vital function for any organization. These documents serve as a legal account of incidents and provide a historical database for analyzing safety trends. By studying past events, companies can identify recurring hazards and determine the effectiveness of their safety programs. This information is essential for developing targeted prevention efforts and for demonstrating compliance with occupational health and safety regulations. Ultimately, these records are a valuable tool for continuous improvement in workplace safety.

116. (D) Producers
In every ecosystem, producers play a fundamental role by converting inorganic compounds into energy-rich organic matter. This process, primarily through photosynthesis, involves capturing solar energy and using it to transform carbon dioxide and water into sugars. These organic compounds then provide the essential energy and nutrients for all other organisms in the food chain. As the foundation of the ecosystem, producers are critical for sustaining life and driving the flow of energy and the cycling of nutrients through the environment.

117. (C) A robust framework of laws and regulations with implementation challenges.
The occupational safety landscape in India is characterized by a comprehensive set of national laws and regulations, such as the Factories Act, designed to protect workers across various sectors. While this legal framework is robust, significant challenges remain in its effective implementation and enforcement, particularly in the vast informal sector. Addressing these gaps requires improved monitoring, better resource allocation, and a stronger commitment to safety culture. Ensuring the well-being of the workforce is essential for India's continued social and economic development.

118. (B) Temperature generally decreases from the equator towards the poles.
The distribution of temperature on Earth is primarily determined by the amount of solar radiation received at different latitudes. Because the sun's rays are more direct at the equator, temperatures are highest in tropical regions. As you move toward the poles, the angle of the sun becomes more slanted, and the energy is spread over a larger area, resulting in a general decrease in temperature. This global temperature gradient is a fundamental driver of atmospheric

Click Here to Buy book on Amazon

forest to establish. This sequence illustrates how life can colonize and transform even the most inhospitable environments.

133. (A) Both A and R are true and R is the correct explanation of A.
In India, the legal requirement to report certain occupational diseases, known as 'notifiable diseases', is a fundamental component of workplace safety. This mandatory reporting provides essential data that allows health and safety authorities to monitor trends, identify high-risk industries, and investigate the underlying workplace conditions. By analyzing this information, authorities can implement targeted preventive measures and develop better regulations to protect other workers. This system is crucial for ensuring that work-related illnesses are detected early and that systemic issues are addressed proactively.

134. (B) Ergonomic hazards
Occupational hazards are generally classified into categories such as physical, chemical, biological, and ergonomic. Ergonomic hazards arise from poorly designed workstations, repetitive motions, or tasks that require excessive force, leading to musculoskeletal disorders over time. Identifying these hazards is a key focus of workplace safety programs, which aim to adapt the work environment to the capabilities of the worker. By addressing ergonomic risks, organizations can improve employee comfort and productivity while significantly reducing the incidence of chronic, work-related injuries and the associated long-term costs.

135. (D) Securing the scene and providing emergency aid.
The 'response' phase of an overall accident investigation begins immediately after an incident occurs. The primary objectives are to secure the scene to prevent further injury and to provide immediate first aid or emergency medical care to any injured persons. This initial stage is also critical for preserving the integrity of physical evidence before it is altered or lost. By ensuring a rapid and organized response, organizations can effectively manage the immediate consequences of an accident while establishing a solid foundation for the subsequent investigative process.

136. (A) National laws and regulations, such as the Factories Act.
In India, the requirement to report workplace accidents is primarily mandated by national legislation and regulations, such as the Factories Act and other relevant labor laws. These statutes define what constitutes a reportable accident and specify the timeline and format for notifying the appropriate government authorities. Compliance with these reporting requirements is essential for legal standing and for providing the government with the necessary data to monitor industrial safety and investigate serious incidents. This legal framework is a cornerstone of national occupational safety management.

137. (C) Evacuation procedures and firefighting operations.
A fire disaster response plan focuses on the immediate actions taken during an active fire event to protect lives and property. Key components include established evacuation procedures to ensure all individuals reach safety and coordinated firefighting operations to control and extinguish the blaze. These actions are time-critical and require clear communication and regular training to be effective. By having a well-rehearsed response plan, organizations and communities can minimize the potential for loss and ensure a more organized and efficient reaction to a fire emergency.

138. (A) The rate at which the resource can be replenished compared to the rate of consumption.
The fundamental difference between renewable and non-renewable resources is their rate of natural replenishment relative to human consumption. Renewable resources, such as solar energy and wind, are replenished on a timescale relevant to human use and are essentially inexhaustible. In contrast, non-renewable resources, like fossil fuels and certain minerals, take millions of years to form and are consumed much faster than they can be naturally replaced. Understanding this distinction is essential for promoting sustainable resource management and transitioning toward more sustainable energy sources.

139. (B) P-4, Q-2, R-3, S-1
Accident prevention involves identifying and addressing both behavioral and environmental

NODIA

is essential for identifying risks, establishing safe exposure limits, and implementing effective protective measures.

126. (D) As energy is transferred, it tends to become less organized and more diffuse.
A key feature of the Second Law of Thermodynamics is that in any energy transfer or transformation, some portion of the energy is lost, typically as heat, leading to an increase in disorder or entropy. In ecosystems, this means that as energy flows from producers through various consumer levels, it becomes less concentrated and less available for work. This fundamental law explains the inefficiency of energy transfer between trophic levels and dictates the structure of ecological pyramids, ensuring that energy must be constantly supplied by the sun.

127. (A) To collect and analyze evidence impartially to determine facts and causes.
The primary function of an investigator in an accident investigation is to conduct a thorough and objective examination of the event to determine what happened and why. This involves systematically collecting various types of evidence, interviewing witnesses, and analyzing facts to identify the contributing factors and root causes. By maintaining impartiality, the investigator ensures that the findings are credible and can be used to develop effective recommendations for prevention. The goal is to improve safety systems rather than assigning blame to individuals.

128. (B) The weight of the air above a given point.
Atmospheric pressure is the force exerted by the weight of the column of air above a specific point on the Earth's surface. As you move higher in the atmosphere, there is less air above you, and consequently, the atmospheric pressure decreases. This pressure is measured with barometers and plays a crucial role in determining weather patterns and the movement of air. Differences in pressure between different areas drive the winds that distribute heat and moisture around the globe, shaping our climate.

129. (C) Statement I is false but Statement II is true.
While both are important, a safety audit and a safety survey have different scopes. A safety survey is a broad assessment of an organization's overall safety culture and attitudes, rather than just a checklist. In contrast, a safety audit is a systematic and comprehensive examination of the entire safety management system to ensure compliance and effectiveness. By using both tools, organizations can address both the behavioral and systemic aspects of workplace safety, ensuring that both physical hazards and underlying management issues are identified.

130. (A) I and III only
Ecosystem-based approaches like EcoDRR leverage natural systems to reduce disaster risk and enhance resilience. Sustainable natural resource management is a core component of this strategy, ensuring that healthy ecosystems like wetlands and forests can continue to provide buffering services. In contrast to being outdated, traditional wisdom is increasingly recognized as a valuable resource in modern planning. Furthermore, nature-based solutions are often more sustainable and cost-effective than traditional engineering, providing multiple environmental co-benefits while effectively addressing societal challenges like disaster risk management.

131. (C) The pathway of energy transfer from one organism to another.
A food chain provides a simplified, linear model of how energy and nutrients move through an ecosystem as one organism consumes another. It typically begins with a primary producer, such as a plant, and proceeds through various consumer levels, including herbivores and carnivores. Each organism in the chain occupies a specific trophic level, representing its position in the flow of energy. While food chains are simplified compared to complex food webs, they are essential for understanding the basic nutritional relationships within a community.

132. (D) Xerosere
Ecological succession is the process of change in the species structure of an ecological community over time. A xerosere is a specific type of succession that begins on a bare, dry surface, such as rock or sand, where there is very little moisture. The process starts with pioneer species like lichens that can survive harsh conditions and gradually build up soil. This allows for more complex plants and eventually a climax

Downloaded from www.pdf.tube

emissions and transition toward sustainable energy sources.

92. (B) The Sun.
The hydrological cycle is the continuous movement of water on, above, and below the surface of the Earth. This process is primarily driven by energy from the sun, which facilitates evaporation from oceans and other water bodies. Solar energy also drives the atmospheric circulation that moves water vapor around the globe, eventually leading to condensation and precipitation. Without the sun's energy, this essential cycle would cease, dramatically affecting the distribution of water and the overall climate and habitability of our planet.

93. (C) At the site of first contact with the toxic substance.
In toxicology, a local effect is an adverse health impact that occurs precisely at the site where a substance first comes into contact with the body. Common examples in industrial settings include skin irritation from chemical splashes or damage to the respiratory tract from inhaling caustic fumes. This contrasts with systemic effects, where the toxicant is absorbed and travels to affect distant organs. Recognizing local effects is crucial for implementing immediate first aid and selecting the correct personal protective equipment for workers.

94. (D) Employee disciplinary action forms.
An investigator's kit is designed to provide all the necessary tools for systematically gathering and documenting evidence at an accident scene. This includes items for measurement, photography, and sample collection, as well as personal protective equipment for the investigators. The goal of the investigation is to find root causes for prevention, not to punish individuals. Therefore, disciplinary action forms are not appropriate components of this kit, as the investigative process should remain focused on impartial fact-finding and the improvement of safety systems.

95. (D) III, IV and V only
Effective fire disaster management requires a multifaceted approach including vulnerability and risk assessments. Identifying susceptible populations and combining the probability of a fire with its potential consequences are essential steps. Mitigation strategies, such as creating fire breaks and using fire-resistant materials, help reduce the overall risk. While many forest fires are human-caused, natural events like lightning also trigger them. Furthermore, fires following earthquakes are considered secondary or cascading disasters. Understanding these distinctions is fundamental for developing robust safety and response protocols for fire emergencies.

96. (B) Discharge of untreated domestic sewage and industrial effluents.
The pollution of major rivers like the Ganga and Yamuna is primarily driven by the large-scale discharge of untreated domestic sewage and industrial waste. Urban centers and industrial zones along these rivers frequently lack adequate treatment facilities, leading to the release of harmful chemicals, pathogens, and organic matter into the water. This contamination severely degrades water quality, harms aquatic ecosystems, and poses serious health risks to the millions of people who depend on these rivers. Addressing this issue requires significant investment in waste treatment infrastructure.

97. (B) The competitive exclusion principle.
The competitive exclusion principle, a fundamental concept in ecology, states that two species competing for the exact same resources cannot coexist indefinitely if their ecological niches are identical. One species will inevitably be slightly more efficient at utilizing resources, leading to the local extinction or displacement of the other. This principle explains why different species in a community typically occupy distinct niches, which reduces direct competition and allows for the high level of biodiversity observed in many stable and healthy natural ecosystems.

98. (A) Age distribution, density, and dispersion.
The structure of a population is defined by several key characteristics that describe how individuals are organized within a given area. These include population density, which is the number of individuals per unit area, and dispersion, which refers to their spatial arrangement. Age distribution is also a critical structural element, as it influences the population's potential for future growth. Understanding these structural aspects is essential for ecologists to study

NODIA

factors. An unsafe act is a person's departure from standard safe procedures, while an unsafe condition is a hazardous physical feature of the workplace. Proactive methods like Job Safety Analysis are used to identify risks before a task begins. A safety audit provides a comprehensive, systematic evaluation of the entire safety management system. By integrating these different approaches, organizations can build a robust safety culture and maintain a high standard of workplace health and safety.

140. (B) A single large tree supporting thousands of insects.
While ecological pyramids often have a wide base of many producers, a pyramid of numbers can be inverted in certain scenarios. A classic example is a single large tree, which counts as one individual producer but supports a very large number of herbivores, such as insects. In this case, the number of individuals at the producer level is far smaller than at the primary consumer level. This illustrates that while energy flow is always unidirectional, the actual numbers of individuals can vary depending on the ecosystem's specific structure.

141. (C) Absorb the impacts of and recover from climate-related events.
Climate resilience refers to the capacity of a system—whether social, economic, or environmental—to withstand, adapt to, and recover from hazardous climate events. Rather than preventing climate change entirely, resilience focuses on building the ability to absorb the impacts of shocks like floods or droughts while maintaining essential functions. This involves both strengthening physical infrastructure and enhancing the adaptive capacity of communities to future variability. Building resilience is a key strategy for reducing disaster risk and ensuring long-term sustainability in a changing global climate.

142. (B) Integrate environmental considerations into strategic decision-making like policies and plans.
Strategic Environmental Assessment, or SEA, is a high-level tool used to ensure that environmental factors, including disaster risks and climate impacts, are integrated into the earliest stages of strategic decision-making. Unlike an Environmental Impact Assessment which focuses on specific projects, SEA applies to overall policies, plans, and programs. By considering environmental consequences at a strategic level, decision-makers can promote more sustainable development paths and build greater societal resilience. This proactive approach is essential for aligning long-term growth goals with environmental protection and disaster risk reduction.

143. (A) Blood pressure and pulse rate.
A vital function test is a routine component of occupational health screening used to assess an individual's basic physiological status. These tests commonly measure indicators such as blood pressure and pulse rate, which provide immediate information about cardiovascular health. Monitoring these vital signs helps in the early detection of stress-related issues or other underlying medical conditions that could be aggravated by specific job demands. Regular screening ensures that employees remain fit for their roles and helps organizations proactively manage potential health risks in the workforce.

144. (B) Restoring a coastal mangrove forest to buffer against storm surges.
An ecosystem-based approach to disaster risk reduction focuses on the restoration and sustainable management of natural systems to protect communities from hazards. For example, restoring coastal mangrove forests provides a natural, self-maintaining buffer that dissipates the energy of storm surges and reduces the impact of coastal flooding. This nature-based solution is often more cost-effective and provides more co-benefits for biodiversity than traditional engineered structures like concrete seawalls. Leveraging such ecosystem services is a fundamental principle of building resilient and sustainable coastal communities.

145. (B) I, II and III only
Climatology involves understanding how temperature, pressure, and wind patterns interact globally. The Koppen system remains a standard for classifying climates based on observed averages. The Earth's heat budget describes the fundamental balance between absorbed solar energy and emitted terrestrial radiation. Furthermore, general atmospheric circulation is primarily driven by the unequal heating of

Click Here to Buy book on Amazon

supplied at the base and is progressively lost at each step in the food chain.

184. (A) Water on, above, and below the surface of the Earth.
The hydrological cycle is the continuous movement of water through the Earth's atmosphere, surface, and underground systems. Driven by solar energy, water evaporates from oceans, condenses into clouds, and falls back to Earth as precipitation, eventually returning to the oceans through runoff and groundwater flow. This cycle is essential for distributing moisture around the planet and sustaining life across all ecosystems. Understanding the hydrological cycle is fundamental to climatology and meteorology, as it shapes weather patterns and determines the availability of water resources worldwide.

185. (C) Health surveillance and monitoring of the work environment.
A core activity of occupational health services is the ongoing surveillance of workers' health and the systematic monitoring of the work environment to identify potential hazards. This proactive approach allows for the early detection of work-related health issues and ensures that safety controls are functioning effectively. By monitoring conditions and health trends, these services can provide expert advice on improving workplace safety and preventing illnesses. This focus on surveillance and prevention is essential for protecting the workforce and promoting long-term health and well-being in all types of industries.

186. (A) A food chain is a single linear path of energy flow, while a food web shows multiple interconnected food chains.
While both models represent feeding relationships, a food chain and a food web differ in their complexity and realism. A food chain shows a single, linear sequence of energy transfer from one organism to another. In contrast, a food web provides a more comprehensive view by illustrating multiple interconnected food chains within an ecological community. Most organisms feed on several types of prey and are eaten by various predators, making the food web a more accurate representation of the interdependent relationships and energy pathways in nature.

187. (D) Incoming solar radiation.
The term 'insolation' is a contraction of 'incoming solar radiation', which refers to the solar energy that reaches the Earth's surface. It is the primary driver of the planet's weather and climate, providing the heat that drives atmospheric circulation, the water cycle, and photosynthesis. The amount of insolation received varies by latitude, season, and time of day, creating the diverse climate zones found on Earth. Understanding insolation patterns is fundamental for climatologists and meteorologists to study global temperature distribution and predict atmospheric and oceanic trends.

188. (B) Uranium
Renewable energy resources are those that are naturally replenished on a human timescale, such as wind, hydropower, and geothermal energy. These sources are considered sustainable for long-term use. In contrast, uranium is a finite resource mined from the Earth for nuclear power generation and is not naturally replenished once consumed. Therefore, it is classified as a non-renewable resource, similar to fossil fuels. Understanding the difference between renewable and non-renewable energy is essential for promoting sustainable energy policies and transitioning toward a more sustainable and secure energy future.

189. (A) P-4, Q-3, R-2, S-1
Ecology involves understanding different levels of organization and roles within nature. A habitat is the physical home of an organism, while an ecological niche is its unique functional role in the community. A population consists of individuals of the same species in an area, and a community includes all interacting populations of different species. Correctly mapping these concepts is fundamental for studying ecosystem structure and function. This understanding helps ecologists analyze how species coexist, utilize resources, and respond to changes within their diverse and complex environments.

NODIA

190. (D) SEA can help integrate disaster risk reduction into high-level policy and planning.
Strategic Environmental Assessment is a high-level planning tool that can be used to integrate disaster risk reduction and environmental

152. (A) Represent the flow of energy or the distribution of biomass/numbers among trophic levels.
An ecological pyramid is a graphical representation used to show how various factors, such as energy, biomass, or the number of individuals, are distributed across the different trophic levels in an ecosystem. These pyramids illustrate the structure of a community and the efficiency of energy transfer from producers at the base up to top predators. By studying these models, ecologists can assess the health and stability of an ecosystem and understand how changes at one level might impact the entire system. They are fundamental tools for ecological analysis.

153. (C) Cause widespread damage to crops and plants.
Frost is a significant environmental hazard that occurs when the temperature drops below freezing, causing ice crystals to form on surfaces. This phenomenon is a major concern for agriculture, as it can severely damage or kill sensitive crops and plants, leading to substantial economic losses. Frost can disrupt cellular structures and interrupt plant growth cycles, especially during critical periods like spring budding. Managing the risk of frost involves monitoring weather patterns and implementing protective measures like using heaters or irrigation to safeguard vulnerable vegetation in frost-prone regions.

154. (A) Both Statement I and Statement II are true.
Industrial disasters are often classified by their root causes, such as technical process failures or human error, to better understand how to prevent them. The investigation of these events is a critical proactive step aimed at identifying the systemic failures that led to the incident. By learning from these disasters, organizations can implement more effective safety regulations and procedures, improving overall workplace safety and protecting both employees and the surrounding environment. Both statements correctly highlight the importance of systematic classification and analysis in disaster management and prevention efforts.

155. (C) II, III and IV only
A systematic accident investigation follows a structured process that includes creating a planning document to organize tasks and responsibilities. Investigators utilize a specialized kit containing tools for documentation and evidence collection at the scene. This evidence is traditionally categorized into four types: people, parts, position, and paper. In contrast, the investigation should not begin with witness interviews before the scene is secured and a plan is developed. Following these organized steps is essential for an impartial and thorough investigation that identifies the true root causes of an incident.

156. (B) Manage and mitigate the effects of a disaster once it has occurred.
In the workplace, disaster control refers to the set of actions and strategies implemented to manage and mitigate the negative consequences of a disaster once it has happened. This includes immediate emergency response, containment of hazards, and efforts to protect lives and property. While prevention is also critical, disaster control specifically focuses on the effective management of the event itself and the initial recovery efforts. By having robust control measures in place, organizations can minimize the overall impact of a disaster and facilitate a more rapid return to normal operations.

157. (C) The distinct layers defined by temperature changes.
A fundamental feature of the atmosphere's structure is its division into distinct layers—the troposphere, stratosphere, mesosphere, and thermosphere. These layers are defined by specific changes in temperature with altitude. For example, in the troposphere, temperatures generally decrease as you go higher, while in the stratosphere, they increase due to the ozone layer. Understanding these layers and their specific characteristics is essential for atmospheric science, weather forecasting, and studying the global climate. This stratified structure is a key element that influences weather patterns and atmospheric behavior around the world.

NODIA

158. (A) Both A and R are true and R is the correct explanation of A.
Ecosystem-based Disaster Risk Reduction is gaining prominence because natural habitats like

wetlands and forests offer effective protection against certain hazards. These ecosystems act as natural buffers, absorbing floodwaters or stabilizing soil on slopes, which can prevent or reduce the impact of floods and landslides. Utilizing these nature-based solutions is often more sustainable and cost-effective than traditional engineering structures, as they are self-maintaining and provide additional co-benefits like biodiversity support. This approach emphasizes that healthy, well-managed ecosystems are a critical component of resilient and safe communities.

159. (A) Inhalation, ingestion, and skin absorption.
Carcinogens are harmful substances that can cause cancer, and in industrial settings, they can enter the human system through several primary routes. Inhalation of airborne particles or fumes into the lungs is a common pathway. They can also be ingested if contaminated hands touch the mouth, or absorbed through the skin following direct contact with chemical substances. Protecting workers from these agents requires a combination of measures, including effective ventilation, the use of personal protective equipment, and strict hygiene protocols to prevent absorption and ensure long-term occupational health.

160. (B) Wild fires are unplanned and uncontrolled, whereas controlled burns are intentional.
The key distinction between a wildfire and a controlled burn is the intent and management behind the fire. Wildfires are unplanned and uncontrolled events that can be triggered by natural causes like lightning or by human activities, posing a significant threat to life and the environment. In contrast, controlled burns, also known as prescribed fires, are intentionally ignited under specific conditions by professionals. These managed fires are used as a management tool to reduce hazardous fuel loads, improve habitat quality, and decrease the risk of future, larger wildfires.

161. (B) Creating fuel breaks and managing vegetation to reduce fire risk.
Mitigation in disaster management involves taking proactive steps to reduce the long-term risk and potential impact of a disaster. For forest fires, this includes strategies such as creating fuel breaks—areas cleared of flammable vegetation—to slow or stop the spread of a fire. It also involves active management of forest debris and other vegetation to reduce the intensity of any blazes that do occur. By implementing these mitigation measures, forest managers can protect communities and biodiversity and improve the effectiveness of subsequent firefighting and emergency response efforts.

162. (A) Energy flow and nutrient cycling processes.
An ecosystem's function refers to the dynamic processes that sustain life and maintain the system's balance. The two most fundamental functions are the flow of energy and the cycling of nutrients. Energy flows in a unidirectional path from the sun through various trophic levels, while essential chemical nutrients are continuously recycled through both the biotic and abiotic components of the environment. These processes ensure that energy and matter are available for all living organisms, making ecosystem function critical for the long-term survival and stability of any natural community.

163. (C) The understanding that healthy ecosystems can enhance community resilience.
A core principle of the eco-based approach to disaster management is the recognition that healthy and well-managed ecosystems are vital for enhancing community resilience. Natural features like wetlands, forests, and mangroves provide essential protective services by buffering against hazards such as floods, storm surges, and landslides. By integrating ecosystem management into disaster planning, communities can leverage these self-maintaining services to reduce risk and improve their ability to recover from environmental shocks. This approach emphasizes the interdependence between human well-being and the health of the natural world.

164. (B) P-3, Q-4, R-2, S-1
Occupational hazards are categorized based on their nature and the type of risk they present. Physical hazards include excessive noise from machinery, while chemical hazards involve the inhalation of toxic fumes. Ergonomic hazards are related to poorly designed workstations that cause strain, and biological hazards involve exposure to pathogens like viruses in healthcare settings.

Downloaded from www.pdf.tube

Understanding these different types of hazards is essential for developing comprehensive safety programs and selecting appropriate protective measures to ensure the long-term health and well-being of workers across all sectors.

165. (C) The population's growth rate and mortality rate.
The functional aspect of a population focus on the dynamic processes that drive changes in its size and composition over time. This includes key factors such as the population's growth rate, which is influenced by birth rates and immigration, and its mortality rate, which reflects the impact of death antagonism. By studying these functional characteristics, ecologists can understand how populations fluctuate in response to environmental pressures and interactions with other species. This perspective is essential for predicting future trends and for developing effective conservation and management strategies for wildlife.

166. (B) High ambient temperature and humidity
Heat-related illnesses, such as heat exhaustion and heatstroke, are a direct health consequence of exposure to high ambient temperatures combined with high humidity. These conditions prevent the body from effectively cooling itself through sweating, leading to a dangerous rise in internal body temperature. These illnesses can range from mild to life-threatening and are a major concern during heat waves, particularly for vulnerable populations. Understanding the risks associated with high heat and humidity is essential for public health preparedness and for implementing protective measures for those working outdoors or in uncooled environments.

167. (B) Understand the sequence of events and contributing factors that lead to an accident.
An accident causation model is a theoretical framework used by safety professionals to analyze how and why accidents occur. These models, such as the Domino Theory or the Swiss Cheese Model, help to identify the sequence of events and the multiple contributing factors—both behavioral and environmental—that lead to an incident. By using these frameworks, organizations can move beyond identifying a single cause and instead find systemic root causes. This deeper understanding is essential for developing effective prevention strategies and building a more robust and proactive safety culture.

NODIA

168. (A) 78% Nitrogen, 21% Oxygen
The Earth's atmosphere is primarily composed of two main gases: nitrogen, which makes up about 78%, and oxygen, which accounts for approximately 21%. The remaining 1% consists of various trace gases, including argon, carbon dioxide, and water vapor. This specific composition is essential for sustaining life, as oxygen is necessary for respiration and nitrogen provides the bulk of the atmospheric pressure. Understanding the atmospheric composition is fundamental to climatology, meteorology, and the study of global environmental changes that can alter the balance of these vital gases.

169. (C) Considers the entire ecosystem, including humans and their interactions, in decision-making.
Integrated ecosystem management is a holistic approach that considers the entire ecosystem as a single functional unit, including the people who live within it and their various interactions with natural resources. Rather than managing individual species or sectors in isolation, this approach seeks to balance environmental, social, and economic goals to ensure long-term sustainability. By considering the complex interdependencies within an ecosystem, decision-makers can develop more effective strategies for conservation, resource management, and disaster risk reduction, promoting resilience and well-being for both nature and human communities.

170. (B) II and IV only
Occupational health services are organized into various functional units, such as medical surveillance and environmental monitoring, and they conduct key activities like health screening to detect work-related effects early. Contrary to being identical, the structure of these services is often tailored to the specific needs of different industries. While they provide emergency care, their primary focus is on prevention and advice rather than just treatment or general health insurance. This specialized approach ensures that the specific health risks associated with different workplaces are identified and managed effectively to protect the workforce.

the planet by the sun. In contrast, atmospheric motion is directly linked to temperature and pressure gradients, and the hydrological cycle is a key part of the climate system that moves moisture around the planet.

146. (A) Diminishes after the exposure to the substance ceases.
In industrial toxicology, a temporary effect is an adverse health impact that is reversible and fades once the individual is no longer exposed to the toxic substance. For example, exposure to certain chemical vapors might cause a transient headache or eye irritation that clears up after moving to fresh air. These effects contrast with chronic or permanent damage which persists long after exposure stops. Monitoring for temporary symptoms is an important part of identifying potential workplace hazards and ensuring that protective measures are effective in preventing more serious health consequences.

147. (C) Water mains for firefighting may be broken.
Fire following an earthquake is a particularly challenging cascading disaster because the primary event often damages the infrastructure needed for a rapid response. Seismic vibrations can rupture underground water mains, leaving firefighters without the water supply needed to control the blazes ignited by broken gas lines or electrical failures. This complexity necessitates disaster plans that include alternative water sources and decentralized response strategies. Understanding these secondary risks is essential for improving urban resilience and ensuring that communities are prepared for the multifaceted impacts of seismic events.

148. (D) Its density and dispersion patterns.
The structural aspect of a population refers to the specific ways in which individuals are organized within their habitat. This includes population density, which measures the number of individuals per unit area, and dispersion patterns, which describe how individuals are spaced out, whether clustered, uniform, or random. These structural features provide important information about the population's health and its relationship with the environment. By analyzing these patterns, ecologists can better understand how species interact, utilize resources, and respond to environmental changes or human activities.

149. (C) A combination of municipal, industrial, and agricultural pollution sources.
The severe pollution seen in major rivers like the Ganga and Yamuna is the result of multiple, interconnected anthropogenic sources. These include the discharge of untreated domestic sewage from urban areas, toxic effluents from industrial zones, and runoff containing chemical fertilizers and pesticides from agricultural lands. This combination of contaminants significantly degrades water quality, harms aquatic ecosystems, and poses serious health risks to human populations. Addressing this complex environmental issue requires integrated waste management strategies and significant investment in treatment infrastructure along the entire length of these rivers.

150. (B) The diversity of livelihoods and access to resources.
A key indicator of climate resilience at the community level is the diversity of livelihoods and the accessibility of essential resources. When individuals have multiple ways to earn a living and can easily access food, water, and healthcare, they are better able to withstand and recover from climate-related shocks like droughts or floods. This diversity provides a safety net that reduces overall vulnerability. Building community resilience involves strengthening these social and economic systems, alongside physical infrastructure, to ensure that the community can adapt to and recover from future climatic variability.

151. (D) Maintaining the health and variety of life and ecological systems for future generations.
Biodiversity conservation is the proactive effort to protect and manage the immense variety of life on Earth, including genetic diversity, species, and entire ecosystems. The fundamental purpose is to maintain the health and resilience of natural systems, which provide essential services such as clean air, water, and climate regulation. By preserving this variety, conservation ensures that the natural world can continue to support all life and adapt to environmental changes. This commitment is vital for ensuring a sustainable and healthy planet for future generations of all species.

Click Here to Buy book on Amazon

steps, identifying potential risks at each stage, and determining the most effective control measures to ensure the task is performed safely. JSAs are conducted before work begins and often involve the workers themselves, fostering a better understanding of safe practices and building a strong safety culture. This proactive approach is essential for preventing workplace injuries and maintaining safety.

178. (A) Documenting investigation findings and recommending actions to prevent recurrences.
The primary purpose of an accident report is to provide a formal record of an incident and its investigation findings. It serves as a tool for safety management by clearly documenting the event, identifying the root causes, and recommending specific corrective actions to prevent similar accidents from occurring in the future. By focusing on learning and improvement, the report helps organizations to strengthen their safety protocols and protect their employees. It is an essential document for continuous improvement in workplace health and safety and for demonstrating regulatory compliance.

179. (A) Both Statement I and Statement II are true.
Workplace accidents are typically caused by a combination of factors, including unsafe acts by individuals and unsafe conditions in the environment. An unsafe act involves a person deviating from established safety procedures, such as failing to wear personal protective equipment. An unsafe condition is a physical hazard inherent to the workplace, like a poorly lit or slippery area. Both statements accurately describe these two fundamental elements of accident causation. Identifying and addressing both acts and conditions through training and maintenance is essential for developing an effective and comprehensive accident prevention program.

180. (A) I and III only
Environmental pollution takes many forms, including noise pollution from traffic and industry, and severe air pollution events like the London smog disaster. These are well-documented examples of how contaminants can harm public health and the environment. In contrast, marine pollution encompasses many sources beyond just oil spills, such as plastic debris and chemical runoff. Furthermore, thermal pollution refers to the degradation of water quality through temperature changes, rather than the contamination of soil with hot materials. Understanding these distinctions is vital for developing effective pollution control and management strategies.

181. (C) Absorb harmful ultraviolet (UV) radiation from the sun.
The ozone layer in the stratosphere plays a vital role in protecting life on Earth by absorbing the majority of the sun's high-frequency ultraviolet radiation. This shield prevents harmful rays from reaching the surface, where they can cause serious health issues like skin cancer and cataracts, and damage ecosystems and agriculture. Protecting the integrity of the ozone layer from man-made chemicals is a major global environmental priority. Understanding this protective function is fundamental for environmental health management and for maintaining the planet's habitability for all living organisms.

182. (B) Organic dusts, molds, and gases from agricultural materials.
Agricultural respiratory diseases are a significant occupational health concern for farmers, often resulting from the inhalation of organic dusts, molds, and various gases produced by agricultural materials like hay, grain, and animal waste. These substances can cause inflammatory responses in the lungs, leading to conditions like farmer's lung or asthma. Preventing these diseases requires improved ventilation in storage areas and the use of appropriate respiratory protection. Identifying and managing these respiratory risks is essential for ensuring the long-term well-being and safety of workers within the agricultural sector.

183. (A) Both Assertion and Reason are true, and the Reason explains the Assertion.
Ecological pyramids of energy are always upright because energy transfer between trophic levels is inherently inefficient. As energy moves from producers to higher-level consumers, a significant portion is dissipated as heat, in accordance with the second law of thermodynamics. This means that each successive level has less available energy than the one below it. The reason provided accurately explains why the energy pyramid cannot be inverted, as energy must be constantly

NODIA

for understanding the environmental factors that shape our world and for predicting the impacts of global phenomena like climate change.

197. (C) The late reproductive and grain-filling stage of a plant.
In agriculture, terminal heat stress specifically refers to high temperature events that occur during the final, critical stages of a crop's development, such as grain filling and reproduction. This heat can significantly reduce crop yields and quality by forcing the plant to mature too quickly and disrupting the accumulation of essential nutrients. Managing the impact of terminal heat is a major challenge for global food security, particularly in regions where temperatures are rising. This issue highlights the importance of developing heat-tolerant crop varieties and more resilient farming practices.

198. (B) Learn lessons to prevent future occurrences.
The primary and most critical objective of investigating industrial disasters is to identify the systemic failures and root causes that led to the event. By understanding these factors, organizations and authorities can learn vital lessons and implement corrective actions to prevent similar incidents from occurring in the future. This proactive approach focuses on improving safety regulations, procedures, and technology rather than simply assigning blame. Effective investigation is essential for building a stronger safety culture and for protecting lives, property, and the environment from the catastrophic impacts of future industrial disasters.

199. (D) Controlling and eliminating hazards at the source.
The prevention of occupational diseases focuses on identifying and controlling hazardous exposures at their source within the workplace. This proactive strategy involves substituting dangerous chemicals with safer alternatives, improving ventilation systems, and implementing ergonomic designs to reduce strain. By eliminating or minimizing the initial hazard, organizations can effectively prevent work-related illnesses before they occur. This approach is more effective and sustainable than simply treating symptoms or providing compensation. Promoting prevention at the source is a fundamental principle of occupational health, essential for ensuring the long-term well-being of all workers.

200. (A) Leveraging the protective services of healthy ecosystems.
A key principle of Ecosystem-based Disaster Risk Reduction, or EcoDRR, is the utilization of the natural protective services provided by healthy ecosystems to reduce disaster risk. Natural features like wetlands, forests, and mangroves act as buffers that can mitigate the impact of hazards such as floods, landslides, and storm surges. By protecting and sustainably managing these ecosystems, communities can build resilience in a way that is often more cost-effective and sustainable than relying solely on engineered solutions. EcoDRR highlights the vital role of environmental health in overall societal safety.

201. (C) The abiotic (non-living) components.
An ecosystem's structure is defined by its physical and biological organization, which includes both biotic and abiotic components. The abiotic, or non-living, parts include essential factors like water, soil, air, and minerals that provide the physical framework for life. These components interact with the living organisms to facilitate ecological processes. While energy flow and nutrient cycling are critical functions, the abiotic elements are fundamental structural building blocks. Understanding this structure is essential for studying how ecosystems are organized and how they respond to natural changes or human-driven environmental impacts.

202. (A) Dry, arid area.
A xerosere is a type of ecological succession that begins in a very dry or arid environment, such as a bare rock or a sand dune. The process starts with pioneer species, often lichens, which can survive extreme conditions with minimal moisture. These organisms gradually transform the environment by building up organic matter and soil, allowing for more complex plant communities to establish themselves over time. Ultimately, the xerosere can lead to the formation of a stable climax community, illustrating the remarkable ability of life to colonize and transform dry landscapes.

203. (D) The competitor's stock price increase.

Downloaded from www.pdf.tube

considerations into the development of national policies and programs. By identifying potential risks early in the decision-making process, SEA supports the implementation of ecosystem-based disaster risk reduction strategies. This integration ensures that strategic plans are resilient and sustainable, reducing the overall vulnerability of communities to natural hazards. The link between SEA and EcoDRR is essential for building robust frameworks that protect both human and natural systems.

191. (A) Hypothermia and infrastructure damage like frozen pipes.
A cold wave is an extreme weather event that can become a disaster due to its severe impact on health and infrastructure. Prolonged exposure to abnormally low temperatures can lead to hypothermia and frostbite, posing a significant risk to life, especially for vulnerable populations. Additionally, extreme cold can cause major infrastructure damage, such as frozen and bursting water pipes, and can severely harm crops and livestock. Preparing for these events involves strengthening public health response and ensuring that essential services and infrastructure are resilient to extreme temperature drops.

192. (B) Musculoskeletal injuries or disorders caused or aggravated by work conditions.
Work-Related Musculoskeletal Disorders are conditions that affect the muscles, tendons, ligaments, and nerves, and are either caused or significantly worsened by workplace activities or environments. These disorders often result from repetitive motions, heavy lifting, or poor ergonomic design. Common examples include carpal tunnel syndrome and chronic back pain. Preventing these issues involves applying ergonomic principles to adapt the workplace to the capabilities of the worker. Addressing these disorders is a major goal of occupational health, essential for maintaining employee comfort, safety, and long-term productivity.

193. (B) State of dynamic equilibrium where populations and environmental conditions are relatively stable.
Ecological balance is a state of dynamic equilibrium within an ecosystem where the populations of various species and their physical environment remain relatively stable over time. This balance is maintained through complex interactions such as predation, competition, and the cycling of energy and nutrients. While natural disturbances can cause temporary fluctuations, healthy ecosystems possess the resilience to return to this equilibrium. Maintaining this balance is essential for the long-term sustainability of all life on Earth and for the continued provision of essential ecosystem services.

NODIA

194. (A) Relevant government authorities are notified for oversight and data collection purposes.
The accident reporting requirement in India is a critical safety regulation ensuring that relevant government authorities are notified when serious workplace incidents occur. This process allows for official oversight, investigations into root causes, and the collection of national safety data. By monitoring these reports, authorities can identify hazardous industries and develop better safety standards and regulations to prevent future accidents. This legal requirement is a cornerstone of national occupational health and safety, promoting transparency and providing a basis for continuous improvement in industrial safety.

195. (A) I and IV only
The Incident Recall Technique is a valuable method for gathering detailed information from people who witnessed or were involved in an event. Furthermore, accident causation models like the Domino Theory provide essential theoretical frameworks for understanding the sequence of factors that lead to incidents. In contrast, a safety audit is a comprehensive evaluation, not a quick check. An unsafe condition is a physical hazard, while an unsafe act is a behavioral one. Finally, writing the final report is the last stage of an investigation, following evidence collection and analysis.

196. (D) Climatology
Climatology is the branch of atmospheric science that focuses on the study of climates and their changes over time. This includes analyzing the global distribution of temperature, atmospheric pressure, and the resulting motion of air, which we experience as wind. By understanding these patterns, climatologists can describe regional climate zones and predict long-term changes in the Earth's climate system. This field is essential

171. (D) The changes in community structure and composition over time.
Community dynamics refers to the study of the ongoing changes in the structure and composition of ecological communities. This field investigates how populations of different species interact and how these interactions, along with environmental factors, lead to shifts in the community over time. A key aspect of these dynamics is ecological succession, where the species in an area change following a disturbance. Understanding community dynamics is essential for managing ecosystems and predicting how they will respond to natural changes or human impacts like climate change or habitat loss.

172. (B) Climate change
Global warming refers specifically to the long-term increase in the Earth's average surface temperature, primarily due to the rise in greenhouse gas concentrations. This phenomenon is a major component of the broader concept of climate change, which encompasses a wider range of changes, including shifts in precipitation patterns, sea-level rise, and more frequent extreme weather events. While global warming is a central driver, climate change describes the overall transformation of global and regional climate systems. Understanding this relationship is essential for developing effective strategies for environmental protection and adaptation.

173. (C) Habitat loss and degradation
The most significant threat to biodiversity globally is the loss and degradation of natural habitats, largely driven by human activities like agriculture, urbanization, and industrial development. When ecosystems are destroyed or significantly altered, the species that depend on them lose their food sources, breeding grounds, and shelter, leading to population declines and extinction. Protecting and restoring habitats is the most critical step in conservation efforts. Addressing this threat is essential for maintaining the ecological balance and the essential services that nature provides, ensuring a sustainable future for all life on Earth.

174. (D) Silicosis from exposure to silica dust
A notifiable occupational disease is a specific condition caused by workplace exposure that must be legally reported to health and safety authorities. Silicosis, a chronic lung disease caused by inhaling silica dust, is a classic example often found in mining and construction. Mandatory reporting allows authorities to monitor the prevalence of such diseases and investigate hazardous work environments to implement preventive measures. This legal requirement is fundamental for occupational health surveillance, helping to protect other workers and ensuring that systemic health risks in various industries are identified and addressed.

175. (A) IV, II, III, I
Ecological succession typically follows a logical sequence of stages over time. The process often begins with nudation, the creation of a bare area through a disturbance. This is followed by colonization by pioneer species, which are adapted to harsh conditions. As these organisms transform the environment, intermediate stages follow with increasing community complexity and biodiversity. Finally, the process leads to a climax stage, representing a stable and self-sustaining community. Understanding this progression is essential for ecological restoration and for managing natural areas as they respond to environmental changes.

176. (B) Both the likelihood of a fire and its potential consequences.
Risk assessment for a fire disaster is a critical process that involves evaluating two key factors: the probability that a fire will occur and the potential severity of its impact on people, property, and the environment. By combining these elements, disaster managers can identify high-risk areas and prioritize prevention and preparedness efforts. This comprehensive approach ensures that resources are allocated effectively to mitigate the most significant threats. Risk assessment is a fundamental component of proactive disaster management, helping communities to build resilience and reduce the overall damage from fire emergencies.

177. (B) Proactive process to identify hazards associated with a job and determine the safest way to perform it.
Job Safety Analysis is a proactive safety tool used to systematically identify and control hazards associated with specific work tasks. The process involves breaking a job down into its individual

Click Here to Buy book on Amazon

The cost of a workplace accident to a company includes a wide range of both direct and indirect expenses. Direct costs commonly include medical bills for injured employees and the repair or replacement of damaged equipment. Significant indirect costs also arise, such as lost production time, administrative costs for the investigation, and the negative impact on company reputation and employee morale. While these factors all negatively affect the company's bottom line, changes in a competitor's stock price are an external market factor and are not considered a cost of the accident itself.

204. (A) Both Statement I and Statement II are true.
General atmospheric circulation is the global system of wind patterns that plays a vital role in transferring excess heat from the tropics toward the poles, helping to regulate the Earth's temperature. This large-scale movement is driven by unequal solar heating and is significantly influenced by the Coriolis effect. The Coriolis effect, caused by the Earth's rotation, deflects the direction of the winds, creating the major wind belts we observe. Both statements correctly describe the fundamental drivers and characteristics of this essential atmospheric process that shapes global climate patterns.

205. (A) I, II and IV only
Biodiversity is a broad concept that includes variety at the genetic, species, and ecosystem levels, and it is primarily threatened by human activities like habitat destruction and the introduction of invasive species. Forest resources are particularly important as they host a vast amount of the world's biodiversity. Contrary to the idea that it has no economic value, the conservation of biodiversity provides immense economic benefits through essential ecosystem services like pollination, water purification, and climate regulation. Understanding these points is vital for promoting effective environmental protection and sustainable development strategies.

206. (D) Affect one or more organs distant from the point of entry.
In industrial toxicology, a systemic effect occurs when a toxic substance is absorbed into the bloodstream and travels to affect organ systems far from the initial point of entry. For example, inhaling certain chemical fumes might lead to damage in the liver, kidneys, or the central nervous system. This differs from a local effect, which is confined to the specific site of contact, such as a skin rash. Understanding systemic toxicity is crucial for establishing safe occupational exposure limits and for implementing effective protective measures to safeguard workers' overall health.

207. (A) Involves both management and worker representatives to collaboratively address safety issues.
A safety committee is most effective when it fosters a collaborative environment that includes representatives from both management and the workforce. By bringing these groups together, the committee can better identify workplace hazards, review safety performance, and recommend practical improvements to policies and procedures. This inclusive approach promotes open communication, enhances employee engagement, and helps to build a strong and proactive safety culture within the organization. Effective safety committees are essential for maintaining a high standard of health and safety and for ensuring that all voices are heard.

208. (A) Both A and R are true and R is the correct explanation of A.
Investigating 'near misses'—events where an accident almost occurred but was avoided—is a critical part of a proactive safety program. These close calls provide valuable information about existing unsafe conditions or behaviors without the consequence of an actual injury. By analyzing these events, organizations can identify and correct hazards before they lead to a real accident. The reasoning provided is correct, as near misses are often warning signs that, if ignored, could lead to serious incidents. Therefore, near-miss reporting is a vital tool for continuous improvement in workplace safety.

209. (B) Environmental issues like climate change and biodiversity loss have planet-wide consequences.
The global concern for the environment arises from the recognition that many ecological problems, such as climate change, ozone layer depletion, and the loss of biodiversity, have consequences that transcend national borders. These issues affect the entire planet and require

Downloaded from www.pdf.tube

The diversity of economic livelihoods within a community is a key indicator, as it reduces dependency on a single resource that might be vulnerable to weather extremes. This variety provides alternative options for survival and recovery, strengthening the overall adaptive capacity of the population.

264. (D) Climatology.
Climatology is the scientific discipline dedicated to studying the Earth's atmosphere, including its origin, composition, and layered structure. This field examines various atmospheric phenomena and the long-term patterns of weather that define the climate. By analyzing elements like temperature, pressure, and solar radiation, climatologists develop a comprehensive understanding of the dynamics that drive global climate systems and their variability.

265. (A) The balance between incoming solar radiation and outgoing radiation.
The Earth's Heat Budget is a fundamental concept for understanding the planet's climate system. It describes the critical balance between the incoming solar radiation received from the sun and the outgoing radiation emitted back into space. This equilibrium governs global temperatures and atmospheric dynamics, ensuring that the planet maintains a relatively stable thermal environment necessary for supporting diverse life forms.

266. (B) Use ecosystem management to reduce the impacts of natural hazards.
Ecosystem-based Disaster Risk Reduction focuses on the sustainable management, conservation, and restoration of healthy ecosystems to lessen the impacts of natural hazards. By utilizing the natural protective functions of environments like wetlands or forests, this approach enhances community resilience. It integrates environmental stewardship into broader disaster management strategies to provide cost-effective and sustainable alternatives or complements to traditional engineering solutions.

267. (B) Contains knowledge about managing local natural resources for resilience.
Traditional environmental wisdom is highly valued in modern disaster management because it encompasses deep-seated knowledge held by indigenous and local communities. This expertise involves historical understanding of local natural resources and effective techniques for managing them to build resilience against hazards. Recognizing these time-tested practices allows for more culturally appropriate and geographically specific strategies in ecosystem-based disaster risk reduction efforts.

NODIA

268. (A) It helps integrate environmental considerations into policies to reduce disaster risks.
Strategic Environmental Assessment provides a vital link to EcoDRR by ensuring that environmental factors are systematically integrated into development plans and policies. This proactive tool allows decision-makers to identify potential disaster risks early in the planning process. By embedding ecosystem services and environmental stewardship into high-level policy, SEA helps reduce vulnerability and promotes more sustainable and resilient development outcomes.

269. (C) Restoring mangrove forests to protect coastlines from storm surges.
Restoring mangrove forests is a prime example of an Ecosystem-based Disaster Risk Reduction or Nature-Based Solution. These coastal ecosystems act as natural buffers, absorbing the energy of waves and protecting shorelines from storm surges and flooding. Unlike artificial barriers, healthy mangroves provide additional benefits, such as carbon sequestration and habitat for biodiversity, while simultaneously enhancing the physical resilience of coastal communities.

270. (D) Promotes and supports the use of eco-based solutions for DRR.
The Partnership for Environment and DRR is a global initiative dedicated to promoting and supporting the implementation of ecosystem-based solutions for disaster risk reduction. It brings together various organizations to advocate for the integration of environmental management into mainstream disaster policies. By providing technical support and fostering collaboration, PEDRR helps nations leverage healthy ecosystems to build community resilience against natural hazards.

216. (A) Has stopped breathing and has no pulse.
Cardio Pulmonary Resuscitation, or CPR, is a critical emergency first-aid procedure used when a person's heartbeat or breathing has stopped. The technique involves chest compressions and, in some cases, rescue breaths to maintain blood flow to the brain and other vital organs until professional medical help arrives. In the workplace, having employees trained in CPR is essential for managing severe medical emergencies, such as cardiac arrest or drowning. This life-saving procedure is a fundamental component of comprehensive occupational health and safety and can significantly improve the chances of survival during a crisis.

217. (C) Skin cancer and cataracts.
The primary health effect of ozone layer depletion is the increased risk of serious medical conditions like skin cancer and cataracts, caused by the greater amount of harmful ultraviolet radiation reaching the Earth's surface. The ozone layer acts as a protective shield, and its thinning allows more of these high-energy rays to penetrate the atmosphere. This increase in UV exposure can damage human cells and the eyes, leading to long-term health consequences. Protecting the ozone layer is therefore a vital global priority for safeguarding public health and the integrity of ecosystems around the world.

218. (A) Help individuals recall details of an incident without leading them.
The Incident Recall Technique is a systematic interviewing method used during accident investigations to help individuals remember the details of an event as accurately as possible. The primary goal is to encourage the recall of the sequence of events without using leading questions that could bias the witness's responses. By obtaining unbiased information directly from those involved, investigators can more accurately reconstruct the incident and identify the contributing factors and root causes. This technique is an essential tool for gathering reliable human testimony and for developing effective prevention strategies.

219. (D) Using indigenous knowledge of plant and animal behavior to predict weather patterns.
Traditional environmental wisdom refers to the accumulated knowledge that local and indigenous communities have developed over generations to live sustainably with their environment. A prime example in disaster management is using observations of animal behavior or plant growth to predict upcoming weather patterns or environmental hazards. This knowledge is deeply rooted in local ecological understanding and can provide valuable, culturally appropriate tools for disaster preparedness and risk reduction. Integrating this traditional wisdom with modern scientific approaches can enhance community resilience and provide more holistic solutions to managing natural disasters.

220. (A) I, III and IV only
Global warming is the long-term heating of the Earth's climate system, and ozone layer depletion caused by CFCs leads to increased UV radiation exposure. Furthermore, climate change can significantly impact health by altering the habitats and distribution of disease-carrying vectors. In contrast, acid rain is primarily caused by sulfur and nitrogen oxides rather than just CO2. Additionally, a cold wave is a period of abnormally cold weather, not hot. Understanding these accurate points is essential for addressing the multifaceted impacts of climate change on the environment and human well-being.

221. (D) A workplace with high noise levels.
An audiometric test is a critical component of a hearing conservation program, specifically used in occupational environments where workers are exposed to high noise levels. Prolonged exposure to loud noise can cause permanent, work-related hearing loss, and regular audiometric testing helps to detect early signs of auditory damage. By identifying these changes, employers can implement protective measures, such as providing better hearing protection or reducing noise at the source. This proactive health monitoring is essential for ensuring the long-term well-being and safety of employees in industrial or construction settings.

222. (D) The changes in the size and composition of populations over time.
Population dynamics is a branch of ecology that focuses on studying how and why population sizes and their compositions change over time. It investigates the complex factors that influence population growth, such as birth and death

Click Here to Buy book on Amazon

international cooperation and global solutions to be effectively addressed. Because natural systems are interconnected, degradation in one part of the world can have far-reaching impacts elsewhere. This shared vulnerability highlights the importance of unified global efforts to promote sustainability and protect the Earth's resources for all future generations.

210. (A) A poorly adjusted chair leading to back pain.
An ergonomic hazard refers to physical factors in the environment that can cause strain or injury due to poor design or fit between the worker and their task. In an office setting, a common example is a poorly adjusted chair that leads to improper posture and eventual back pain. Addressing these hazards through ergonomic assessments and the provision of adjustable furniture is essential for preventing work-related musculoskeletal disorders. By optimizing the workstation design, organizations can improve employee comfort and well-being, which is fundamental for maintaining health and productivity in an office environment.

211. (C) Stratospheric ozone
Water pollution is caused by the introduction of harmful contaminants into water bodies, primarily through human activities such as the discharge of industrial effluent, agricultural runoff containing pesticides and fertilizers, and the release of untreated domestic sewage. These sources degrade water quality and harm aquatic life. In contrast, stratospheric ozone is a beneficial gas layer in the upper atmosphere that protects the Earth from ultraviolet radiation and is not a source of water pollution. Understanding the primary sources of contamination is essential for developing effective strategies to protect our water resources.

212. (D) Communities and assets that are most at risk and why.
The primary goal of a vulnerability assessment for a wildfire is to identify which communities, infrastructure, and natural assets are most susceptible to harm and the reasons for this risk. This process involves evaluating factors such as geographic location, building materials, and the presence of flammable vegetation nearby. By understanding these specific vulnerabilities, disaster managers can develop targeted mitigation and preparedness strategies to protect the most at-risk areas. This proactive approach is essential for reducing the potential impact of wildfires and building more resilient and safe communities.

NODIA

213. (C) The severity of injury or duration of absence from work as stipulated by law.
A reportable accident is defined by specific legal or regulatory criteria, which typically include the severity of the injury sustained or the amount of time an employee is unable to work following the incident. These standards ensure that all significant safety events are documented and reported to the relevant government authorities for monitoring and investigative purposes. Following these clear guidelines is essential for organizational compliance and for providing the data necessary to identify industrial safety trends and improve overall workplace health and safety standards on a national level.

214. (B) P-3, Q-1, R-4, S-2
Ecological science uses various concepts to describe the complexity of nature. An ecological pyramid provides a graphical view of trophic levels, while a food web represents the interconnected feeding relationships in a community. Biogeochemical cycles describe the movement of essential elements like carbon and nitrogen through the environment. Ecological succession is the process of change in a community's composition over time. Correctly matching these terms is fundamental for understanding how ecosystems are structured and how they function to maintain life and ecological stability across different landscapes.

215. (D) The movement of air, which we experience as wind.
Atmospheric motion refers to the large-scale movement of air across the Earth's surface and throughout its atmosphere, which is commonly experienced as wind. This motion is primarily driven by differences in atmospheric pressure, which are caused by the unequal heating of the planet by the sun. As air moves from high-pressure areas to low-pressure areas, it distributes heat and moisture around the globe, shaping weather and climate patterns. Understanding atmospheric motion is fundamental to meteorology and climatology, as it is the basis for all weather systems on Earth.

health services can effectively identify hazards, monitor health trends, and provide expert advice to ensure a safe and healthy workplace for all employees.

229. (A) Both Statement I and Statement II are true.
The cost of a workplace accident encompasses far more than direct medical expenses; it also includes significant hidden costs such as damaged reputation and reduced employee morale. Furthermore, the principles of accident prevention are based on the belief that accidents are not random events and that through proper management, hazard identification, and safety culture, all incidents are fundamentally preventable. Both statements accurately reflect the modern understanding of the economic impact and the proactive philosophy behind occupational health and safety. Embracing these principles is essential for developing effective and comprehensive safety management systems.

230. (A) I and III only
In most ecosystems, the sun serves as the ultimate source of energy, and the transfer of this energy is strictly governed by the laws of thermodynamics. While energy flows in a unidirectional manner and is lost as heat at each level, essential nutrients are what cycle through the environment. Furthermore, a food web is a complex network of interconnected pathways rather than a single linear chain. Understanding these fundamental principles of energy and nutrient dynamics is essential for studying ecosystem structure, function, and overall stability in the natural world.

231. (D) Systematically review the entire safety management system's effectiveness.
A safety audit is a comprehensive and systematic evaluation designed to assess the overall effectiveness of an organization's safety management system. Unlike a simple hazard check, the audit examines safety policies, procedures, and documentation to ensure they comply with legal standards and industry best practices. The goal is to identify systemic weaknesses and provide recommendations for continuous improvement. By conducting regular audits, companies can verify that their safety controls are functioning as intended and proactively manage risks, maintaining a high and consistent standard of workplace health and safety.

232. (A) Climate refers to long-term atmospheric patterns, while weather is the short-term state.
The key difference between climate and weather lies in the timeframe of the atmospheric observations. Weather describes the short-term state of the atmosphere at a specific time and place, including daily changes in temperature, precipitation, and wind. In contrast, climate refers to the long-term averages and patterns of these weather conditions over a period of many years, typically thirty or more. Understanding this distinction is essential for climatologists and meteorologists to study both daily atmospheric variability and the long-term trends and changes in global climate systems.

233. (A) Both A and R are true and R is the correct explanation of A.
Industrial toxicology is a critical field within occupational health because it provides the scientific foundation for understanding how chemical substances in the workplace interact with human health. By studying the harmful effects and mechanisms of these toxicants, researchers can establish safe exposure limits and develop protective measures like ventilation and personal protective gear. The reason provided correctly explains the field's importance, as this scientific understanding is essential for identifying risks and implementing effective strategies to prevent work-related illnesses. Protecting workers from chemical hazards is a fundamental goal of comprehensive occupational health programs.

234. (A) global-scale system of winds.
In the context of the atmosphere, general circulation refers to the global-scale system of winds that moves air and heat around the entire planet. This system is driven by the unequal heating of the Earth's surface by the sun, with excess heat from the tropics being transported toward the poles. It includes major wind belts such as the trade winds and westerlies, which play a fundamental role in determining global climate patterns and weather systems. Understanding this large-scale motion is essential for climatologists and meteorologists to predict long-term atmospheric trends and seasonal changes.

Downloaded from www.pdf.tube

rates, and migration patterns. By analyzing these changes, scientists can understand how populations respond to environmental pressures, resource availability, and interactions with other species. Understanding population dynamics is fundamental for managing wildlife, predicting future trends, and developing effective conservation strategies to ensure the long-term survival of species and the health of ecosystems.

223. (A) Planning, training, and drills undertaken before a fire occurs.
Preparedness for a fire disaster involves a range of proactive activities conducted before an incident happens to ensure an effective and organized response. This includes developing detailed emergency plans, providing staff training on fire safety, and conducting regular fire drills to practice evacuation and response procedures. It also involves the regular maintenance of firefighting equipment. By being well-prepared, organizations and communities can significantly reduce the risk to life and property and improve their ability to recover from a fire emergency. Preparedness is a vital phase of proactive disaster risk management.

224. (B) An act is behavioral, while a condition is environmental or physical.
The fundamental difference between an unsafe act and an unsafe condition lies in their nature as either behavioral or environmental factors. An unsafe act is a person's departure from established safe work procedures, such as failing to wear protective gear. In contrast, an unsafe condition is a physical or environmental hazard in the workplace, like a broken guard on a machine or a slippery floor. Identifying and addressing both types of factors is essential for effective accident prevention and for building a comprehensive and proactive safety culture within any organization.

225. (A) II, III, I, IV
The hydrological cycle is a continuous process driven by solar energy. Starting with water in the ocean, the sequence begins with evaporation into the atmosphere. This is followed by condensation, where water vapor forms into clouds. The next stage is precipitation, as water falls back to the Earth's surface as rain or snow. Finally, runoff occurs as water flows across the land and returns to the oceans. Understanding this logical sequence is fundamental for studying the global distribution of water and the weather patterns that shape our environment.

226. (A) Understanding the nature of the event for better prevention and response planning.
Classifying industrial disasters based on their cause, magnitude, and impact area is a critical step for improving safety management. This classification helps organizations and authorities to better understand the nature of different events and to develop targeted prevention and response strategies. By analyzing the characteristics of various types of disasters, planners can identify systemic vulnerabilities and implement more effective safety regulations and procedures. This systematic approach is essential for reducing the risk of future incidents and for building more resilient industrial systems that protect both people and the environment.

227. (C) Ensure the sustainable use and health of ecosystems so they can provide disaster reduction services.
In the context of EcoDRR, the role of natural resource management is to ensure that ecosystems remain healthy and are used sustainably. Healthy ecosystems, such as forests and wetlands, provide essential services that buffer against natural hazards like floods and landslides. By managing these resources effectively, communities can maintain the natural buffering capacity that reduces disaster risk. This approach balances human needs for resources with the necessity of preserving the ecological integrity that provides long-term protection. Sustainable resource management is therefore a cornerstone of building resilience through nature-based solutions.

228. (D) A department for product sales.
Occupational health services are structured around several core components designed to protect workers' well-being. This structure includes specialized functional units for monitoring the work environment, a system for health screening to detect work-related effects, and a framework for providing emergency care and first aid. These services focus exclusively on health and safety and do not include departments unrelated to these goals, such as product sales. By maintaining this focused structure, occupational

NODIA

241. (B) Predictions (guesses about what might have happened)
During an accident investigation, professionals focus on gathering four specific types of factual evidence: people through witness statements, parts of equipment involved, the exact position of items at the scene, and paper evidence such as logs and records. These facts are used to reconstruct the event and identify root causes. In contrast, predictions or guesses about what might have happened are not considered valid evidence, as the investigation must be based on impartial fact-finding rather than speculation. Focusing on verifiable data is essential for maintaining the credibility and effectiveness of the investigative process.

242. (A) Cascading or secondary hazard.
A fire following an earthquake is a classic example of a cascading or secondary hazard, where the initial disaster triggers a subsequent one. Seismic vibrations can rupture gas lines or cause electrical failures, leading to blazes that often cause more damage than the earthquake itself. These situations are particularly dangerous as the primary event may have already damaged infrastructure like water mains, making firefighting difficult. Disaster management plans must account for these complex interactions to ensure that communities are prepared for both the primary event and the secondary risks that can follow.

243. (C) Density, dispersion, and age structure.
The structure of a population is defined by several key characteristics that describe how its members are organized within a given area. This includes population density, which measures the number of individuals per unit area, and dispersion patterns, which describe how individuals are spaced out across the landscape. Age structure is also a critical structural element, providing information about the population's potential for future growth or decline. Understanding these structural features is essential for ecologists to assess population health, predict future trends, and develop effective conservation and management strategies for various species.

244. (A) Both Statement I and Statement II are true.
Community dynamics is the branch of ecology that studies how the species composition and structure of a community change over time, which includes the study of ecological succession. Succession can be categorized by the environment where it starts: a hydrosere begins in a water body, while a xerosere starts in a dry area. Both statements accurately reflect these fundamental ecological concepts. Understanding these dynamics and the different types of succession is essential for managing natural ecosystems and predicting how they will respond to natural changes or human-driven environmental disturbances.

245. (C) I, III and IV only
Environmental problems are now globally recognized as crossing national borders, requiring international cooperation. Major global issues include the loss of biodiversity and the management of non-renewable resources like fossil fuels due to their finite nature and pollution potential. Contrary to being abundant, water and forest resources are under significant pressure and are major sources of global concern. While international issues are a primary driver, local actions also contribute to global trends. Understanding these points is essential for developing effective global strategies for environmental protection and sustainable resource management for the future.

246. (B) Adapting the job and workplace to the physical and mental capabilities of the worker.
Ergonomics is the scientific discipline concerned with the relationship between humans and their work environment. Its primary objective is to adapt the design of jobs, equipment, and workstations to match the physical and mental capabilities of the worker. By optimizing this interaction, ergonomics aims to enhance safety, reduce the risk of injuries like repetitive strain, and improve overall productivity and well-being. This proactive approach to workplace design is essential for maintaining the long-term health and efficiency of a diverse workforce.

247. (D) Using proper ventilation and respiratory protection when handling dusty or moldy materials.
Preventing respiratory diseases in agriculture requires targeted measures to reduce exposure to harmful dusts and molds. This involves ensuring proper ventilation in areas where materials like

Click Here to Buy book on Amazon

235. (D) Providing multiple co-benefits like biodiversity enhancement and carbon sequestration.
Nature-based solutions, or NBSs, provide a sustainable approach to managing societal challenges like disaster risk. A primary benefit of NBSs is that they offer multiple co-benefits beyond their primary function. For example, a restored wetland can reduce flooding while also enhancing biodiversity and sequestering carbon. These solutions are often more resilient and cost-effective than traditional engineering because they leverage the natural functions of ecosystems. By providing these diverse benefits, NBSs support both environmental health and human well-being, making them a key strategy for building sustainable and resilient communities for the future.

236. (B) Repeated or continuous exposure over time.
In industrial toxicology, a cumulative effect refers to an adverse health impact that results from a toxic substance building up in the body over time. This occurs when an individual experiences repeated or continuous exposure to a hazard, and the substance is absorbed faster than it can be metabolized or excreted. Eventually, the accumulated amount reaches a level that causes harm, even if each individual exposure was low. Understanding cumulative toxicity is essential for establishing long-term occupational exposure limits and for designing health monitoring programs to protect workers from chronic health risks.

237. (C) Identifying systemic failures and improving safety regulations and practices.
The investigation of an industrial disaster is a critical process aimed at identifying the underlying systemic failures that allowed the event to occur. By thoroughly analyzing the causes, authorities and organizations can learn vital lessons and implement improvements to safety regulations, industrial practices, and technology. This focus on prevention and learning is essential for reducing the risk of future incidents and for building a more robust safety culture across the industry. Effective investigation is a fundamental tool for protecting lives, property, and the environment from the catastrophic impacts of major industrial accidents.

238. (D) High levels of workplace stress and burnout leading to health issues.
While industrial disasters often involve physical events like explosions, corporate hazards frequently relate to the psychological and social environment of the workplace. A prime example is exposure to high levels of workplace stress and burnout, which can lead to serious mental and physical health issues over time. These corporate hazards are increasingly recognized as significant occupational health concerns that require their own set of management and prevention strategies. Addressing these issues through supportive management practices and work-life balance is essential for maintaining the overall health, well-being, and productivity of employees in a corporate setting.

NODIA

239. (B) P-3, Q-1, R-4, S-2
Environmental science involves different resources, threats, and cycles. Wind energy is a classic renewable resource, while coal is a finite, non-renewable one. Habitat loss represents a primary threat to global biodiversity. The nitrogen cycle is an example of a biogeochemical cycle that moves essential nutrients through the environment. Correctly matching these terms is fundamental for understanding environmental management and sustainability. This knowledge helps in developing effective strategies for resource conservation, biodiversity protection, and maintaining the ecological balance of the planet for future generations.

240. (B) Organize tasks, timelines, and responsibilities for the investigation team.
A planning matrix is an essential organizational tool used by an accident investigation team to structure the entire process effectively. It helps to identify all the necessary investigative tasks, establish clear timelines, and assign specific responsibilities to each team member. By providing a clear roadmap, the matrix ensures that the investigation is thorough, systematic, and completed in a timely manner. This organized approach is vital for accurately gathering evidence, identifying root causes, and developing effective recommendations for prevention. It is a fundamental component of a professional and well-managed accident investigation process.

a species survives and reproduces within its specific ecosystem.

255. (C) Ecosystem.
An ecosystem serves as the fundamental unit of ecological study, representing the complex interaction between a community of living organisms and their non-living physical environment. It integrates both biotic components, such as plants and animals, and abiotic components, like air and water. These systems are categorized by their specific structural arrangements and the functional processes that occur within them.

256. (B) The second law of thermodynamics.
The second law of thermodynamics dictates that energy transfers are never perfectly efficient, as some energy is inevitably lost as heat, increasing entropy. In ecosystems, this law explains the unidirectional and non-cyclical flow of energy. As energy moves through trophic levels, the significant loss at each step prevents it from being recycled back to the original solar source.

257. (D) A food chain illustrates a single linear pathway of energy transfer, whereas a food web shows multiple interconnected pathways.
A food chain represents a single, linear pathway through which energy and nutrients move from one organism to another. In contrast, a food web provides a more realistic and complex illustration of an ecological community by showing multiple interconnected and overlapping feeding relationships. This network demonstrates how various species interact within an ecosystem rather than following a simple sequence.

258. (A) There is a progressive loss of energy at each transfer between trophic levels.
The pyramid of energy remains always upright because of the significant and progressive loss of energy at each successive trophic level. According to thermodynamic principles, energy transfer is inefficient, with much energy dissipated as heat during metabolic processes. Consequently, the total energy available to higher-level consumers is invariably less than the energy captured by producers at the base.

259. (C) Transformed into chemical energy by producers.
The first law of thermodynamics states that energy can neither be created nor destroyed, only transformed from one form to another. In an ecological context, this principle is observed when primary producers, such as plants, capture solar radiation. Through the process of photosynthesis, they transform this light energy into chemical energy, which then becomes available to other organisms.

260. (A) The significant loss of energy at each trophic level.
Food chains have a limited length primarily due to the inefficient transfer of energy between trophic levels. Since a large portion of energy is lost as heat at every step, only a small fraction reaches the next level. Eventually, the remaining energy becomes insufficient to support another viable population of consumers, thereby restricting the number of possible links.

261. (D) Absorb climatic stresses and reorganize while maintaining essential functions.
Climate resilience describes the inherent capacity of social, economic, and environmental systems to handle stresses and shocks from extreme weather or long-term climate changes. A resilient system can reorganize itself after a disturbance while successfully maintaining its essential identity, structure, and functions. This adaptive capability is crucial for ensuring the long-term stability and survival of communities in a changing environment.

NODIA

262. (B) Temperature and precipitation.
Classification schemes developed by climatologists like Koppen and Thornthwaite utilize specific climatic data to delineate distinct zones across the globe. These formal systems rely primarily on temperature and precipitation patterns as their foundational elements. By analyzing these two variables, scientists can categorize different regions into world climate types, providing a standardized framework for understanding global atmospheric variations and ecological distributions.

263. (C) The diversity of economic livelihoods within a community.
Resilience indicators represent the characteristics that enable a system to absorb shocks and maintain function during climate variability.

grain or hay are stored and handled to disperse airborne contaminants. Workers should also use appropriate respiratory protection, such as masks or respirators, when performing tasks that generate significant dust. By implementing these safety practices and promoting awareness of the risks, the agricultural sector can protect the health of farmers and reduce the incidence of respiratory conditions.

248. (A) Determining legal guilt or innocence.
During an accident investigation, the primary role of the investigator is to gather and analyze facts to determine the root causes of the event. This involves securing the scene, collecting various types of evidence, and interviewing witnesses to reconstruct what happened. The goal is to provide recommendations that prevent similar incidents from recurring, thereby improving safety. It is not the investigator's function to determine legal guilt or innocence; that is the role of the judicial system and legal authorities based on the evidence found.

249. (C) The susceptibility of people, property, and the environment to harm from a potential fire.
A vulnerability assessment for a fire disaster is a comprehensive evaluation that considers how susceptible different elements are to the harmful effects of a fire. This includes assessing the risk to human life, the potential for property damage based on building materials and location, and the possible impact on local ecosystems. By identifying these vulnerabilities, disaster managers can develop targeted strategies for prevention, preparedness, and response. This proactive approach is essential for reducing the overall impact of fire events and protecting communities and assets.

250. (A) The integration of ecosystem management and traditional wisdom into disaster planning.
Effective disaster risk management involving natural resources emphasizes the integration of sustainable ecosystem management and traditional environmental wisdom into overall planning. This approach recognizes that healthy, well-managed ecosystems provide vital services that buffer against hazards and enhance community resilience. By combining modern scientific techniques with time-tested local knowledge, planners can develop more holistic and effective strategies for reducing disaster risk. This integrated perspective is essential for creating sustainable communities that are better prepared to withstand and recover from the impacts of natural and environmental disasters.

251. (B) Habitat describes the physical environment of an organism, while niche describes its functional role within that environment.
A habitat represents the physical location or address where an organism lives, defined by specific environmental conditions. Conversely, an ecological niche encompasses the functional role or profession of a species within its ecosystem. This includes its interactions with other species and its specific contributions to the flow of energy and the cycling of nutrients within the community.

252. (A) The composition and arrangement of its living and non-living components.
The structure of an ecosystem is defined by the specific composition and arrangement of its biotic and abiotic components. Biotic elements include all living organisms, while abiotic factors consist of non-living physical and chemical environment variables. Together, these elements determine the system's arrangement, including species diversity and the organization of various trophic levels within the habitat.

253. (C) Energy flow and the cycling of nutrients.
Function within an ecosystem refers to the dynamic processes that sustain the biological community and maintain stability. These essential functions primarily manifest through the continuous flow of energy from the sun through various trophic levels and the biogeochemical cycling of nutrients. Understanding these processes is vital for assessing the overall health, productivity, and long-term sustainability of the ecological system.

254. (D) Ecological niche.
Studying how a species sources food, builds nests, and interacts with predators focuses on its ecological niche. While a habitat is merely a physical location, the niche represents the functional role or profession of the organism. It includes all interactions with the biotic and abiotic environment, describing exactly how

Downloaded from www.pdf.tube

271. (C) Understand their nature in order to effectively manage the associated risks.
Classification of occupational hazards into categories like physical, chemical, or ergonomic is essential for a systematic approach to workplace safety. This process allows health professionals to understand the unique nature and characteristics of different risks found in various industries. By identifying the specific type of hazard, organizations can develop and implement targeted management strategies and preventative measures to protect workers effectively.

272. (B) The complete physical, mental, and social well-being of workers.
Occupational health is a comprehensive field that extends beyond the simple absence of illness or workplace injuries. It encompasses the complete physical, mental, and social well-being of individuals in their working environment. This holistic perspective ensures that all aspects of a worker's health are protected and promoted, fostering a safe and supportive atmosphere that contributes to overall quality of life.

273. (D) To detect potential work-related health problems at an early stage.
The primary objective of occupational health screening is the early detection of potential health problems or diseases caused by workplace exposures. By identifying subtle changes in a worker's health before symptoms become severe, preventative actions can be taken more effectively. This proactive measure is crucial for managing occupational diseases and ensuring that interventions occur when they are most likely to succeed.

274. (A) The requirement for it to be reported to government authorities.
A notifiable occupational disease is distinguished by the legal requirement to report its occurrence to government or public health authorities. This mandatory reporting facilitates systematic monitoring and data collection on workplace illnesses. It allows authorities to track prevalence, identify high-risk industries, and implement broader public health strategies or prevention measures aimed at reducing the occurrence of severe work-related conditions.

NODIA

275. (C) Implementing preventative measures and promoting worker well-being.
The structured framework and various functional units of occupational health services are designed to safeguard employees. Their primary activities focus on implementing preventative measures to mitigate hazards and promoting the overall well-being of the workforce. By providing specialized services like health screening and hazard management, these units ensure a proactive approach to maintaining a healthy, safe, and productive work environment.

276. (A) Local
A toxic effect is classified as local when the adverse reaction occurs specifically at the site where the chemical agent makes contact with the body. An allergic skin reaction resulting immediately from a chemical splash on the arm is a direct result of the substance interacting with the skin surface. This differs from systemic effects, which involve absorption into the bloodstream.

277. (D) Adapt job tasks and the work environment to fit human capabilities.
Ergonomics is a specialized field focused on designing the workplace and job tasks to align with the physical and cognitive capabilities and limitations of the human body. The primary goal is to ensure that the work environment fits the worker, rather than forcing the worker to adapt to a poorly designed setup. This approach reduces strain and enhances overall efficiency.

278. (B) Work-Related Musculoskeletal Disorder (WRMSD).
Carpal tunnel syndrome resulting from repetitive hand movements is a classic example of a Work-Related Musculoskeletal Disorder. These injuries affect muscles, nerves, and tendons, often caused by awkward postures or excessive force in the workplace. Ergonomic principles aim to prevent such disorders by ensuring that job tasks do not place unsustainable physical stress on the body over long periods of time.

279. (C) Dermal absorption.
Carcinogens can enter the human system through several distinct biological pathways. Dermal absorption, where substances pass through the skin upon contact, is a major recognized route of entry in various industrial settings. Other

4. The process where radiation is converted into other forms of energy within a medium.

(A) P-4, Q-2, R-1, S-3
(B) P-1, Q-3, R-4, S-2
(C) P-4, Q-1, R-2, S-3
(D) P-3, Q-2, R-1, S-4

8. A remote sensing satellite captures an image of a dense urban area and an adjacent large forest. If both areas are imaged at the same time on a clear day, which area is likely to exhibit a higher spectral reflectance in the near-infrared (NIR) region?

(A) The forest, due to high chlorophyll content in healthy vegetation.
(B) The urban area, due to high reflectance of concrete and asphalt.
(C) Both areas will have nearly identical reflectance in the NIR bands.
(D) The reflectance depends on the satellite altitude, not surface type.

9. Which of the following best defines the term 'spectral signature'?

(A) The unique sound frequency emitted by an object when illuminated by EMR.
(B) A digital code embedded in a satellite image used to identify its origin.
(C) The pattern of reflectance of a material as a function of wavelength.
(D) The temporal variation in an object's temperature over a 24-hour period.

10. Which of the following is an exception to the processes that EMR undergoes when interacting with the Earth's surface?

(A) Refraction
(B) Absorption
(C) Reflectance
(D) Transmission

11. Consider the following statements about satellite resolutions:

Statement I : Spatial resolution refers to the ability of a sensor to distinguish between different wavelengths of energy.

Statement II : Temporal resolution refers to the frequency with which a satellite sensor can revisit the same location on Earth.

Which of the following is correct?

(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is false, but Statement II is true.
(D) Statement I is true, but Statement II is false.

12. What does 'radiometric resolution' of a sensor refer to?

(A) The size of the smallest object that can be detected on the ground.
(B) The ability of the sensor to discriminate slight differences in energy.
(C) The total number of spectral bands the sensor is capable of recording.
(D) The time it takes for the satellite to revisit the same geographic area.

13. Which of the following correctly pairs a satellite orbit type with its primary characteristic?

(A) Geostationary Orbit - Provides high spatial resolution imagery of the poles.
(B) Sun-synchronous Orbit - Stays fixed over a single point on the equator.
(C) Geostationary Orbit - Appears stationary from Earth for communication.
(D) Sun-synchronous Orbit - Orbits the Earth primarily from east to west.

14. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : The spectral response of water is generally low and decreases as wavelength increases from visible to near-infrared.

Reason (R) : Water is a strong absorber of near-infrared radiation.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

15. What is the fundamental difference between a satellite and a sensor in the context of remote sensing?

(A) A satellite is the platform, while the sensor is the instrument.
(B) A sensor is the platform, while the satellite is the instrument.
(C) Satellite and sensor are interchangeable terms for the system.
(D) A satellite processes data, while a sensor

Click Here to Buy book on Amazon

288. (B) An inspection focuses on specific hazards, while an audit examines the entire safety management system.
A safety inspection is a focused activity that identifies specific hazards or non-compliance on the shop floor, often using a checklist. In contrast, a Safety Audit is a much more comprehensive and independent examination of the entire health and safety management system. It evaluates policies, training programs, and procedural effectiveness, looking beyond physical conditions to ensure the whole system works.

289. (D) Safety inspection.
A safety inspection involves a formal and planned walk-through of a facility to identify specific physical hazards or non-compliance with established standards. By using a checklist to document issues like blocked exits or unguarded machinery, the inspection team can systematically record findings for immediate correction. This routine proactive measure is essential for maintaining a safe physical environment and ensuring daily compliance.

290. (A) Safety Audit
The Safety Audit is the most comprehensive tool available for evaluating an organization's safety performance. It involves a systematic, critical, and independent examination of the entire health and safety management system, including its policies, procedures, and legal compliance. By providing a complete picture of effectiveness, the audit helps identify systemic weaknesses that broader surveys or specific inspections might overlook.

291. (C) The occurrence of heat-related illnesses like heatstroke.
Intense heat waves pose direct and immediate threats to human health, frequently resulting in terminal heat and various heat-related illnesses. Heatstroke is a severe condition that occurs when the body can no longer regulate its temperature due to extreme external heat. Such meteorological events can lead to significant mortality if communities lack the proper adaptation measures and public health strategies to respond.

292. (A) Increased exposure to harmful ultraviolet (UV) radiation.
The primary public health concern regarding ozone layer depletion is the resulting increase in harmful ultraviolet radiation reaching the Earth's surface. The stratospheric ozone layer acts as a protective shield; its thinning leads to higher rates of skin cancer, cataracts, and immune system suppression in human populations. Addressing this long-term threat is essential for mitigating risks associated with increased UV exposure.

293. (D) Global warming can increase the frequency and intensity of heat waves.
Global warming represents the long-term heating of the Earth's climate system, which has a direct impact on meteorological patterns. This phenomenon is known to exacerbate both the frequency and the intensity of extreme heat waves. As global temperatures rise, these periods of intense heat become more common and more severe, presenting growing challenges for environmental health and population safety worldwide.

294. (B) Respiratory problems and ecosystem damage.
Acid rain is a climate change phenomenon primarily caused by atmospheric pollutants that damage sensitive ecosystems. Beyond its ecological impact, acid rain has been scientifically linked to various respiratory problems in human populations. Understanding the complex interactions between atmospheric chemistry and health is crucial for developing environmental policies aimed at reducing the emissions that lead to such harmful precipitation and its consequences.

NODIA

295. (C) Weather events with specific risks to human health and safety.
Cold waves, frost, and fog are discussed as specific meteorological events that present immediate risks to human health and safety. Cold waves and frost can lead to conditions like hypothermia, while fog often increases the likelihood of transportation accidents. These events demonstrate how short-term weather variability directly influences environmental health, necessitating targeted adaptation measures to protect vulnerable populations from harm.

296. (D) Because they can be depleted if they are exploited unsustainably.

1. Rapid damage assessment and mapping of affected areas.
2. Monitoring reconstruction and land use planning for rebuilding.
3. Hazard and vulnerability zonation mapping.
4. Developing evacuation route plans and resource inventories.

(A) P-1, Q-2, R-4, S-3
(B) P-3, Q-4, R-1, S-2
(C) P-3, Q-1, R-4, S-2
(D) P-4, Q-3, R-2, S-1

44. What does 'Hazard Zonation' in the context of Disaster Risk Reduction (DRR) refer to?
(A) The process of counting the number of people affected by a disaster.
(B) Mapping areas based on the probability of a hazard occurring.
(C) The financial assessment of damages after a disaster has occurred.
(D) The administrative planning of emergency evacuation routes.

45. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Remote Sensing is highly effective for rapid damage assessment immediately after a disaster like a flood or earthquake.
Reason (R) : Satellite imagery can provide a synoptic view of a large affected area quickly, allowing for the identification of damaged infrastructure and inundated regions.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

46. Which of the following best defines 'Vulnerability Assessment' in the context of DRR?
(A) Identifying the physical probability of a natural hazard occurring.
(B) Estimating the potential financial losses from a specific disaster.
(C) Mapping the intensity of an earthquake or depth of floodwaters.
(D) Evaluating characteristics of a community susceptible to hazards.

47. How can GIS contribute to land use planning for sustainable development in a disaster-prone area?
(A) By integrating hazard maps with land use to regulate development.
(B) By generating random land use patterns to confuse developers.
(C) By focusing exclusively on economic development without risks.
(D) By deleting all historical data about past disasters in the area.

48. Consider the following statements about using RS and GIS for DRR:
1. GIS can be used to model the potential path of a hurricane.
2. High-resolution satellite imagery can help identify landslides in remote mountainous areas.
3. RS and GIS are only useful in the post-disaster response phase.
4. Vulnerability maps can be created by combining socio-economic data with hazard maps in a GIS.

Which of the given statements are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2, and 4 only
(D) 1, 2, 3, and 4

49. 'Risk' in the context of disaster management is often conceptualized as a function of which three components?
(A) Time, Location, and Intensity
(B) Hazard, Vulnerability, and Exposure
(C) People, Infrastructure, and Economy
(D) Response, Recovery, and Mitigation

50. The term 'atmospheric window' refers to a portion of the electromagnetic spectrum where:
(A) The atmosphere is transparent to radiation.
(B) The atmosphere is opaque to radiation.
(C) Only visible light can pass through.
(D) All radiation is scattered.

51. Consider the following key developments in the history of Remote Sensing. Arrange them in the correct chronological order from earliest to latest.
1. Launch of LANDSAT-1
2. Invention of photography

Downloaded from www.pdf.tube

CHAPTER 08

Remote Sensing and Geographic Information System

1. What is the most accurate definition of Remote Sensing?
(A) Mapping the Earth's surface through direct physical contact with various environmental objects.
(B) Obtaining information about an object or area using data from a device not in physical contact.
(C) Creating digital maps using only terrestrial or ground-based surveying and mapping equipment.
(D) Studying atmospheric phenomena using sensors mounted on balloons or meteorological stations.

2. Consider the following statements regarding the principles of remote sensing:
Statement I : All remote sensing systems involve the measurement of electromagnetic energy.
Statement II : The interaction of electromagnetic energy with the Earth's surface is uniform across all materials.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

3. Which of the following statements correctly describes the relationship between wavelength and frequency of Electromagnetic Radiation (EMR)?
(A) Wavelength and frequency are directly proportional to each other.
(B) Wavelength increases with an increase in the energy of the radiation.
(C) They are inversely proportional, with their product being a constant.
(D) Frequency is independent of the speed of light in a vacuum medium.

4. Which statement is NOT a characteristic of Electromagnetic Radiation (EMR)?
(A) It can travel through a vacuum.
(B) It is composed of oscillating fields.
(C) It travels at the speed of light.
(D) It requires a medium for propagation.

5. In the context of EMR interaction with the atmosphere, which type of scattering primarily affects shorter wavelengths like blue light, causing the sky to appear blue?
(A) Mie scattering
(B) Non-selective scattering
(C) Rayleigh scattering
(D) Compton scattering

6. Identify the incorrect statement regarding atmospheric windows.
(A) They are bands where EMR passes with relatively little attenuation.
(B) They represent regions of the spectrum absorbed by atmospheric gases.
(C) They are crucial for designing sensors for Earth observation from space.
(D) The visible portion of the spectrum is a well-known atmospheric window.

7. Match the items in List I with those in List II and select the correct option.
List I: (EMR Interaction)
P. Absorption
Q. Reflectance
R. Scattering
S. Transmission
List II: (Description)
1. Unpredictable redirection of radiation by atmospheric particles.
2. The process where radiation is redirected from a surface.
3. The process where radiation passes through a substance.

NODIA

Although water and forest resources are technically classified as renewable because they can replenish naturally over time, they remain highly vulnerable. If these resources are exploited at a rate faster than they can regenerate, they face the risk of severe depletion. Unsustainable management can lead to scarcity or permanent damage, highlighting the need for careful stewardship to ensure their long-term availability.

297. (A) The unsustainable exploitation of natural and energy resources.
The primary threat to global biodiversity stems from the unsustainable exploitation of natural and energy resources. This overexploitation leads to a cascade of negative environmental impacts, including habitat destruction, pollution, and climate change. As resources are depleted or managed poorly, the variety of life on Earth is diminished, undermining the health of ecosystems and the essential services they provide to humanity.

298. (B) Generating non-renewable energy.
Forest resources perform several vital ecological roles, such as regulating the climate, preventing soil erosion, and harboring a vast proportion of the planet's biodiversity. However, they are not a source of non-renewable energy; rather, wood is considered a renewable resource if harvested sustainably. Non-renewable energy sources, such as fossil fuels, are finite and belong to a different resource category entirely.

299. (B) An integrated approach to managing various natural resources.
Effective biodiversity conservation requires a holistic and integrated approach to managing the planet's various natural resources. Since biodiversity is intrinsically linked to the health of water, forests, and energy systems, protecting species cannot be done in isolation. By integrating the management of these resources, society can better address the root causes of habitat loss and environmental degradation, ensuring sustainability.

300. (A) Fossil fuels.
Based on the standard classification of natural resources, fossil fuels are categorized as non-renewable because they exist in finite quantities. These resources are formed over millions of years and cannot be replenished on a human timescale once they are consumed. In contrast, solar energy is inherently renewable, and water and timber can be replenished naturally if managed through sustainable practices.

Click Here to Buy book on Amazon

only transmits signals.

16. Which of the following is NOT a fundamental technique of satellite image interpretation?
(A) Visual interpretation based on elements like tone, texture, and pattern.
(B) Physical collection of surface samples by the satellite instruments.
(C) Digital image processing using various automated computer algorithms.
(D) Ground-truthing to verify interpretation results using field observations.

17. Consider the following statements about remote sensing concepts:
1. Passive remote sensing systems have their own source of illumination.
2. Active remote sensing systems measure reflected solar energy.
3. Radar is an example of an active remote sensing system.
4. A camera with a flash is analogous to an active remote sensing system.

Which of the given statements are correct?
(A) 1 and 2 only
(B) 3 and 4 only
(C) 1, 2 and 3 only
(D) 2, 3 and 4 only

18. What is the primary purpose of digital image processing in remote sensing?
(A) To extract information from raw data through enhancement and classification.
(B) To convert analog satellite signals into a standard viewable digital format.
(C) To improve the aesthetic quality of an image for public gallery display.
(D) To physically store the vast amounts of data collected by various satellites.

19. Which of the following defines the "Energy Balance Equation" in the context of EMR interaction with a surface?
(A) Incident Energy = Reflected Energy - Absorbed Energy - Transmitted Energy
(B) Incident Energy = Reflected Energy + Absorbed Energy - Transmitted Energy
(C) Incident Energy = Reflected Energy + Absorbed Energy + Transmitted Energy
(D) Incident Energy = Reflected Energy x Absorbed Energy / Transmitted Energy

20. Arrange the following EMR wavelength regions in order of increasing wavelength.
1. Visible Light
2. Microwave
3. X-ray
4. Infrared

Choose the correct option:
(A) 1, 3, 4, 2
(B) 2, 4, 1, 3
(C) 3, 4, 1, 2
(D) 3, 1, 4, 2

21. What is the philosophical core of a Geographic Information System (GIS)?
(A) A tool designed solely for creating visually appealing digital maps.
(B) A system for storing and managing any generic type of digital data.
(C) A framework for managing and analyzing data rooted in geography.
(D) A software designed exclusively for processing satellite imagery.

22. Consider the following statements regarding GIS data:
Statement I : Spatial data describes the geographic location and shape of features.
Statement II : Non-spatial data, or attribute data, describes the characteristics of the spatial features.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

23. Which of the following is NOT considered a core component of a GIS?
(A) Hardware
(B) Software
(C) Data
(D) Satellite Sensor

24. Match the items in List I with those in List II and select the correct option.
List I: (GIS Component)
P. Hardware
Q. Software
R. Data
S. People
List II: (Example/Function)

Downloaded from www.pdf.tube

1. Vector layers and attribute tables
2. GIS Analyst
3. High-speed computer/processor
4. ArcGIS, QGIS

(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-1, S-2
(C) P-3, Q-1, R-4, S-2
(D) P-4, Q-3, R-2, S-1

25. In GIS, what is the fundamental unit of a raster data model?
(A) A point with x, y coordinates
(B) A node connecting two lines
(C) A grid cell or pixel
(D) A polygon defined by a closed loop of arcs

26. Which of the following is a primary advantage of the vector data model over the raster data model?
(A) It provides a more precise representation of discrete boundaries.
(B) It is better for representing continuous surfaces like elevation.
(C) The data structure is inherently simple and easy to manage.
(D) It is computationally less intensive for large overlay analysis.

27. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Topology is a key advantage of the vector data model in GIS.
Reason (R) : Topology explicitly stores spatial relationships between features.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

28. Which of the following is a significant disadvantage of the raster data model?
(A) The total inability to store attribute data in cells.
(B) Large data volumes and potential loss of specific detail.
(C) Extreme difficulty in representing various continuous data.
(D) The absolute inability to perform any spatial analysis.

29. Which of the following correctly describes non-spatial data in a GIS context?
(A) The coordinate information of a point feature.
(B) The grid cell values in a raster dataset.
(C) Descriptive attributes such as name, type, or population.
(D) The topological relationships between polygons.

30. Consider the following statements about GIS data models:
1. The raster model uses a grid of cells to represent geographic space.
2. The vector model uses points, lines, and polygons to represent features.
3. The raster model is generally more efficient for storing discrete features.
4. The vector model allows for the explicit storage of topological relationships.
5. Simple data structures are a key advantage of the vector model.

Which of the given statements are correct?
(A) 1, 2, and 4 only
(B) 2, 3, and 5 only
(C) 1, 3, 4, and 5 only
(D) 1, 2, 3, and 4 only

NODIA

31. A GIS analyst needs to represent a continuous surface like temperature variation across a region. Which data model would be most appropriate for this task?
(A) Raster data model, where each cell holds a temperature value.
(B) Vector data model, using a dense network of coordinate points.
(C) A topological data model without any underlying geometric data.
(D) A non-spatial database table without geographical coordinates.

32. The concept of "topology" in a vector GIS primarily deals with:
(A) The thematic attributes of geographic features.
(B) The spatial relationships between connecting features.
(C) The coordinate system and projection of the data.

(D) The resolution of the underlying raster grid.

33. Which raster data compression technique encodes data by storing the value and the number of consecutive cells with that value in a row?
(A) Chain code
(B) Run-length code
(C) Quadtree
(D) Block code

34. Which of the following pairs concerning raster data compression is incorrectly matched?
(A) MrSID - A lossless compression technique.
(B) Run-length code - Encodes rows of identical cell values.
(C) Chain code - Represents boundaries of regions.
(D) Quadtree - Recursively subdivides the raster into quadrants.

35. The process of converting data from a paper map or a scanned image into a digital vector format in GIS is commonly known as:
(A) Georeferencing
(B) Rasterization
(C) Digitizing
(D) Buffering

36. What is the primary function of a Database Management System (DBMS) in the context of a GIS?
(A) To provide tools for creating complex map layouts.
(B) To capture satellite imagery directly from the sensor.
(C) To define the coordinate projection of spatial data.
(D) To manage and retrieve non-spatial attribute data.

37. Consider the following statements about spatial data input in GIS:
Statement I : Data input is often the most time-consuming and expensive part of a GIS project.
Statement II : Scanning a map creates vector data directly without any further processing.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

38. The process of aligning a raster image or vector dataset to a known coordinate system is called:
(A) Attribute joining
(B) Geometric transformation
(C) Data compression
(D) Thematic mapping

39. Which of the following is an example of a vector data file format?
(A) GeoTIFF
(B) JPEG2000
(C) MrSID
(D) Shapefile

40. Which of the following is NOT a direct advantage of using a DBMS to manage GIS data?
(A) Automatic correction of topological errors
(B) Reduced data redundancy
(C) Improved data security and access control
(D) Support for multi-user access and editing

41. Which raster data compression method represents a region by a sequence of unit vectors that describe its boundary?
(A) Run-length encoding
(B) Block code
(C) Chain code
(D) Quadtree

42. Global and national initiatives for Disaster Risk Management (DRM) using RS & GIS primarily aim to:
(A) Provide a framework for using geospatial technology in DRM.
(B) Increase the frequency of natural disasters for research purposes.
(C) Replace all ground-based disaster response teams with drones.
(D) Focus solely on financial aspects of post-disaster reconstruction.

43. Match the items in List I with those in List II and select the correct option.
List I: (Disaster Management Phase)
P. Mitigation/Prevention
Q. Preparedness
R. Response
S. Recovery
List II: (Relevant RS & GIS Application)

Click Here to Buy book on Amazon

primary pathways include inhalation through the respiratory tract and ingestion via the digestive system. Understanding these entry points is critical for implementing effective protective measures for workers.

280. (D) Whether the effect is confined to the point of contact or affects the entire body.
The distinction between systemic and local toxic effects depends on where the adverse reaction manifests within the body. Local effects are confined to the specific point of contact, such as the skin or eyes. Systemic effects, however, occur only after the toxic substance is absorbed into the bloodstream and distributed to various internal organs, affecting the body as a whole.

281. (A) Unsafe condition.
A loose safety guard on a machine represents an unsafe condition because it is a physical or environmental hazard present in the workplace. Unlike an unsafe act, which involves a person violating a safe procedure, an unsafe condition is an inherent flaw in the physical surroundings or equipment. Identifying and repairing such mechanical hazards is a fundamental step in accident prevention.

282. (B) To provide a framework for understanding the multiple factors leading to an accident.
Accident causation models provide a theoretical framework for understanding the complex sequence of events and multiple underlying factors that lead to an incident. Instead of simply assigning blame to a single individual, these models analyze systemic failures, environmental conditions, and behavioral patterns. This comprehensive perspective is essential for identifying root causes and implementing effective corrective actions to prevent future recurrences.

283. (B) Identifying and eliminating both hazardous conditions and unsafe behaviors.
The core principle of accident prevention involves a proactive dual strategy. It requires the identification and elimination of both hazardous physical conditions and unsafe human behaviors or acts. By addressing environmental risks and promoting safe work procedures simultaneously, organizations can create a comprehensive safety net. This balanced approach moves beyond reactive responses to establish a sustainable culture of safety and health.

284. (A) Pre-defined legal and organizational criteria.
The distinction between reportable and non-reportable accidents is determined by pre-defined legal and organizational criteria. These standards establish which incidents must be officially documented and communicated to authorities based on factors like the severity of injury or duration of absence from work. Following these criteria ensures that the organization remains in compliance with safety regulations and facilitates proper investigation.

285. (C) Promoting a safety culture and participating in the investigation process.
A safety committee contributes significantly to workplace safety by fostering a strong safety culture and actively participating in the accident investigation process. This group serves as a collaborative platform where workers and management can address hazards and recommend improvements. Their involvement ensures that safety remains a priority and that investigations are thorough, leading to more effective measures for preventing future accidents.

NODIA

286. (D) Job Safety Analysis (JSA).
Job Safety Analysis is a systematic procedure used to improve workplace safety by breaking down a single job into its specific constituent tasks. For each individual step, potential hazards are identified, and safe work procedures are recommended. This detailed approach ensures that all risks associated with a particular occupation are understood and mitigated, providing clear guidance for workers to follow.

287. (C) Safety sampling.
Safety sampling is a quantitative tool used to measure the safety performance of a specific group or area through random observations. By recording the number of safe and unsafe practices observed during a given period, managers can determine a ratio that reflects overall compliance. This technique provides a quick and statistically relevant snapshot of safety behaviors, such as following correct lifting procedures.

3. Manned spaceflight photography
4. Balloon aerial photography

Choose the correct option:
(A) 1, 2, 3, 4
(B) 2, 3, 4, 1
(C) 2, 4, 3, 1
(D) 4, 2, 1, 3

52. The ability of a remote sensing system to detect objects of a certain size on the ground is known as its:
(A) Spectral resolution
(B) Radiometric resolution
(C) Temporal resolution
(D) Spatial resolution

53. Consider the following statements:
Statement I : Mie scattering occurs when the diameter of atmospheric particles is roughly equal to the wavelength of the EMR.
Statement II : Non-selective scattering affects all visible wavelengths equally, causing fog and clouds to appear white.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

54. The unique pattern of reflection and absorption of EMR by a specific surface material, which can be used for its identification, is termed its:
(A) Radiometric profile
(B) Spectral signature
(C) Spatial characteristic
(D) Temporal index

55. Which of the following is an example of an active remote sensing sensor?
(A) A photographic camera without a flash.
(B) A multispectral scanner recording reflected sunlight.
(C) A thermal infrared sensor detecting emitted heat.
(D) A RADAR (Radio Detection and Ranging) system.

56. The number and dimension of specific wavelength intervals in the EMR spectrum to which a remote sensing instrument is sensitive is called:
(A) Spectral resolution
(B) Spatial resolution
(C) Radiometric resolution
(D) Temporal resolution

57. Which type of satellite orbit allows for continuous observation of a specific area on the Earth's surface, typically over the equator?
(A) Sun-synchronous orbit
(B) Polar orbit
(C) Geostationary orbit
(D) Near-polar orbit

58. What is the most significant advantage of the raster data model in GIS?
(A) It has a simple data structure and is ideal for continuous data.
(B) It represents discrete boundaries with high precision.
(C) It requires very little data storage space.
(D) It inherently stores topological relationships between features.

59. A GIS database that stores features as points, lines, and polygons is based on which data model?
(A) Raster data model
(B) Image data model
(C) Surface data model
(D) Vector data model

60. Consider the following statements about GIS concepts:
1. Spatial data defines the 'where' aspect of information.
2. Non-spatial data is also known as attribute data.
3. A GIS must contain both spatial and non-spatial data to be functional.
4. The shape of a country on a map is an example of non-spatial data.
5. The population of a country is an example of spatial data.

Which of the given statements are correct?
(A) 1 and 2 only
(B) 1, 2, and 3 only
(C) 3, 4, and 5 only
(D) 1, 2, 4 and 5 only

61. What is the process of assigning map coordinates to an image or other data layer known as?

Downloaded from www.pdf.tube

137. Which of the following is the best description of a "digital image" in remote sensing?
(A) A photograph taken with a film camera.
(B) A 2D array of pixels with digital brightness numbers.
(C) A hand-drawn map based on satellite observations.
(D) A text file describing atmospheric sensor conditions.

138. The process of modifying raster or vector data to fit a new coordinate system, often involving complex mathematical equations, is known as:
(A) Data compression
(B) Attribute editing
(C) Geometric transformation
(D) Thematic classification

139. In a GIS context, if you want to find the shortest driving route between two points, you would use:
(A) Overlay analysis
(B) Buffering
(C) Network analysis
(D) Raster calculation

140. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The use of GIS and remote sensing has become integral to modern disaster risk management.
Reason (R) : These technologies provide essential tools for hazard mapping, vulnerability assessment, real-time monitoring, and damage assessment, covering all phases of the disaster management cycle.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

141. The fundamental unit in a vector data model is a:
(A) Cell
(B) Point defined by a coordinate pair
(C) Pixel
(D) Layer

142. The main cause for the sky appearing blue on a clear day is:
(A) Mie scattering of blue light by aerosols.
(B) Rayleigh scattering of blue light by gas molecules.
(C) Non-selective scattering of light by water droplets.
(D) Absorption of all colors except blue by atmosphere.

NODIA

143. Consider the following statements about remote sensing resolutions:
1. Spatial resolution refers to the size of a pixel on the ground.
2. Spectral resolution refers to EMR spectrum parts measured.
3. Temporal resolution refers to the revisit time.
4. Radiometric resolution refers to energy difference sensitivity.
5. High spatial resolution is always better than temporal.

Which of the given statements are correct?
(A) 1, 2, 3 and 4 only
(B) 2, 3, 4 and 5 only
(C) 1, 3 and 5 only
(D) All of the above

144. In GIS, what is a key difference between raster data structure and vector data structure?
(A) Raster data stores coordinates for each cell, while vector data does not.
(B) Vector represents features; Raster represents space exhaustively.
(C) Raster is for networks; Vector is for continuous surfaces.
(D) Vector data cannot store attribute information.

145. What is the primary role of GIS in Land Use Planning for Sustainable Development?
(A) Integrating spatial data to support informed decision-making.
(B) Automatically generating legally binding zoning laws.
(C) Creating aesthetically pleasing maps with no analytical purpose.
(D) To exclusively monitor construction projects.

from occurring.

Which of the given statements are correct?

(A) 1 and 2 only
(B) 3 and 4 only
(C) 1, 2 and 3 only
(D) 2, 3 and 4 only

70. The scattering of EMR by particles that are much smaller than the wavelength of the radiation is known as:

(A) Mie Scattering
(B) Rayleigh Scattering
(C) Non-selective Scattering
(D) Raman Scattering

71. Which part of the electromagnetic spectrum is most significantly absorbed by water vapor and carbon dioxide in the atmosphere?

(A) Visible Light
(B) X-rays
(C) Radio waves
(D) Certain bands within the Infrared region

72. Consider the following statements:

Statement I : A high temporal resolution is crucial for monitoring rapidly changing phenomena like floods.

Statement II : A 1-meter spatial resolution image provides more detail than a 30-meter spatial resolution image.

Which of the following is correct?

(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

73. The fundamental principle of remote sensing is based on measuring the EMR that is:

(A) Created by the object itself.
(B) Only absorbed by the object.
(C) Reflected or emitted by the object.
(D) Transmitted through the object.

74. If a sensor can distinguish 256 different shades of grey (intensity levels), its radiometric resolution is said to be:

(A) 8-bit
(B) 2-bit
(C) 4-bit
(D) 16-bit

75. In the context of the historical evolution of GIS, which of the following is a key milestone?

(A) The invention of the printing press.
(B) The discovery of magnetism.
(C) The launch of the first weather satellite.
(D) The development of the Canada GIS (CGIS) in the 1960s.

76. Arrange the following GIS data representation concepts in a logical hierarchy, from fundamental to a complete model.

1. Point, Line, Polygon
2. Coordinate Pair (X,Y)
3. Vector Data Model
4. Feature

Choose the correct option:

(A) 2, 4, 1, 3
(B) 2, 1, 4, 3
(C) 3, 1, 4, 2
(D) 4, 3, 2, 1

77. In a raster data structure, the cell value typically represents:

(A) The geographic coordinates of the cell's center.
(B) The distance to the next cell with the same value.
(C) The attribute of the geographic area covered by the cell.
(D) A code indicating the internal digital file format.

78. Which of the following is a primary reason for using projections in GIS?

(A) To increase the file size of spatial data.
(B) To convert vector data to raster data.
(C) To eliminate the need for attribute data.
(D) To represent 3D Earth on a 2D map surface.

79. A GIS user wants to combine a land use layer (polygons) with a soil type layer (polygons) to create a new layer showing unique combinations of land use and soil type. This operation is an example of:

(A) Overlay Analysis
(B) Buffering
(C) Georeferencing
(D) Edge Matching

Click Here to Buy book on Amazon

(C) All features must have the same set of attributes.
(D) It uses coordinate pairs to define location and shape.

118. Consider the following statements:
Statement I : The philosophy of GIS involves seeing the world as a set of thematic layers that can be integrated and analyzed based on their common geography.
Statement II : A GIS is fundamentally a tool for storing lists of names and addresses without any geographical context.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

119. Geometric transformations in GIS, such as rotation, scaling, and translation, are applied to:
(A) Change the thematic values in a raster file.
(B) Correct distortions and align data to a coordinate system.
(C) Query attribute tables.
(D) Compress raster data files.

120. Which of these is NOT a principle of EMR interaction with the Earth's surface?
(A) Absorption
(B) Reflection
(C) Polarization
(D) Transmission

121. For an emergency response team, what is the most critical GIS function immediately following a major earthquake?
(A) Long-term land use planning.
(B) Historical trend analysis of seismic activity.
(C) Overlaying maps to prioritize response and accessibility.
(D) Updating the city's zoning regulations.

122. Arrange the following historical developments related to GIS and Remote Sensing in the correct chronological sequence.
1. Desktop GIS software
2. McHarg overlay analysis
3. High-res commercial satellites
4. Canada GIS (CGIS)

Choose the correct option:
(A) 2, 4, 1, 3
(B) 4, 2, 1, 3
(C) 2, 1, 4, 3
(D) 4, 1, 2, 3

123. Which of the following is an example of non-spatial data?
(A) The coordinates of New Delhi.
(B) The boundary of a national park.
(C) The name of a river.
(D) The route of a highway.

124. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : In GIS, vector data models are generally preferred over raster models for representing networks like roads and rivers.
Reason (R) : The linear nature and topological properties (connectivity) of networks are more efficiently and accurately stored and analyzed using vector lines and nodes.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

125. The process of converting vector data to raster data is called:
(A) Vectorization
(B) Rasterization
(C) Digitization
(D) Georeferencing

126. A satellite that revisits the same location every 16 days has a:
(A) 16-day spatial resolution
(B) 16-day temporal resolution
(C) 16-day spectral resolution
(D) 16-day radiometric resolution

127. Which of the following is a primary role of a DBMS within a GIS framework?
(A) To perform geometric transformations on vector data.
(B) To provide a structured environment for attribute data.
(C) To compress raster imagery using quadtrees.
(D) To interpret the spectral signatures of

(C) Raster is used for non-spatial data; Vector is used for spatial data.
(D) Raster is a newer model; Vector is an older, outdated model.

89. Consider the following statements about EMR interaction with the atmosphere:
1. Rayleigh scattering is most effective on shorter wavelengths.
2. Mie scattering is caused by large particles like dust and smoke.
3. Non-selective scattering is wavelength-dependent.
4. Absorption bands are regions where EMR passes through the atmosphere freely.

Which of the given statements are correct?
(A) 1 and 2 only
(B) 3 and 4 only
(C) 1, 2 and 4 only
(D) 2 and 3 only

90. A sun-synchronous orbit is designed so that the satellite:
(A) Passes over a point on Earth at the same local solar time.
(B) Remains stationary over a single point on the equator.
(C) Orbits directly over the North and South poles on every pass.
(D) Gradually moves away from the Earth over time.

91. What is the most fundamental difference between spatial and non-spatial data?
(A) Spatial data is numeric, while non-spatial data is textual.
(B) Spatial data is in raster format, while non-spatial is in vector.
(C) Spatial data is always accurate, while non-spatial can have errors.
(D) Spatial data includes location, while non-spatial describes characteristics.

92. All of the following are components of a GIS EXCEPT:
(A) Methods
(B) Raw electromagnetic energy
(C) People
(D) Data

93. The term 'topology' in GIS refers to:
(A) The study of landforms and topography.
(B) The process of creating a visually pleasing map layout.
(C) Geometric properties unchanged by stretching or bending.
(D) The thematic classification of satellite imagery.

94. What is the primary disadvantage of using the vector data model for representing phenomena like elevation or temperature?
(A) It is impossible to store attribute data for vector features.
(B) The file sizes are always larger than equivalent raster files.
(C) Topological relationships cannot be established.
(D) It creates sharp boundaries for continuous phenomena.

95. In the context of disaster management, what does a 'vulnerability map' typically show?
(A) Assets susceptible to harm from a hazard.
(B) The physical location and strength of past earthquakes.
(C) The areas where a specific hazard is most likely to occur.
(D) The paths of designated evacuation routes.

96. Which of the following is an example of a raster data file format?
(A) Shapefile (.shp)
(B) GeoTIFF (.tif)
(C) KML (.kml)
(D) GeoJSON

97. Consider the following statements:
Statement I : Geometric transformation in GIS can be used to correct distortions in a scanned map.
Statement II : A projection is a type of geometric transformation.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

NODIA

98. Which of the following is NOT an advantage of having topology defined in a vector dataset?
(A) It simplifies the data structure into a raster

(A) Proliferation
(B) Projection
(C) Georeferencing
(D) Generalization

62. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : In a vector data model, topology must be explicitly built.
Reason (R) : Vector data files like shapefiles do not inherently store topological information like adjacency; it must be computed or stored in a more advanced data structure.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

63. Which of the following is NOT a form of raster data compression?
(A) Chain code
(B) Run-length code
(C) Quadtree
(D) Lempel-Ziv-Welch (LZW)

64. Match the items in List I with those in List II and select the correct option.
List I: (GIS Term)
P. Topology
Q. Projection
R. Rasterization
S. Digitizing
List II: (Definition)
1. Converting vector data into raster data.
2. The science of the spatial relationships between geographic features.
3. The process of converting analog maps into digital vector data.
4. A mathematical transformation of 3D Earth onto a 2D surface.
(A) P-2, Q-4, R-1, S-3
(B) P-4, Q-2, R-3, S-1
(C) P-2, Q-1, R-4, S-3
(D) P-3, Q-4, R-1, S-2

65. A city's planning department wants to identify all residential properties located within 500 meters of a proposed new highway. This type of GIS analysis is best described as:
(A) Overlay
(B) Buffering
(C) Network analysis
(D) Thematic mapping

66. In disaster risk management, which of the following tasks would be most difficult to perform using only remote sensing data without a GIS?
(A) Calculating total number of people living within a high-hazard zone.
(B) Identifying areas of flood inundation.
(C) Detecting the location of a new landslide.
(D) Observing the smoke plume from a large forest fire.

67. Which of the following statements about 'Risk and Vulnerability Assessment' is incorrect?
(A) Vulnerability can include social, economic, and physical factors.
(B) GIS is an effective tool for overlaying hazard and vulnerability data to create risk maps.
(C) Risk is independent of the hazard's probability of occurrence.
(D) Risk assessment helps prioritize areas for mitigation efforts.

68. The primary goal of 'Land use planning and regulation for sustainable development' in the context of DRR is to:
(A) Maximize short-term economic gain regardless of risk.
(B) Prohibit all new construction in an entire region.
(C) Encourage high-density population settlements in coastal zones.
(D) Guide development away from high-hazard areas to reduce vulnerability.

69. Consider the following statements regarding the application of RS & GIS in DRR:
1. Satellite imagery is used for damage assessment by comparing pre- and post-disaster images.
2. GIS helps in identifying optimal locations for relief shelters.
3. Hazard zonation maps are static and never need updating.
4. RS technology can prevent natural disasters

Downloaded from www.pdf.tube

(A) NDMA projects like the Database for Emergency Management.
(B) The National Mission for Clean Ganga (NMCG).
(C) The Swachh Bharat Mission.
(D) The Make in India initiative.

109. Which of the following statements about the components of GIS is incorrect?
(A) Hardware includes the computer as well as digitizers.
(B) Software provides the tools needed to analyze and display info.
(C) People are essential for managing and applying the system.
(D) Data in a GIS is exclusively non-spatial.

110. Match the items in List I with those in List II and select the correct option.
List I: (Term)
P. Spatial Resolution
Q. Spectral Signature
R. Topology
S. Hazard Zonation
List II: (Associated Concept)
1. Vector Data Model
2. Disaster Risk Reduction
3. Pixel Size
4. Reflectance Curve
(A) P-3, Q-4, R-1, S-2
(B) P-1, Q-2, R-3, S-4
(C) P-3, Q-1, R-4, S-2
(D) P-4, Q-3, R-2, S-1

111. Which of the following is the most significant advantage of a topological vector data structure over a simple 'spaghetti' vector structure?
(A) It uses less disk space.
(B) It stores relationships enabling complex queries.
(C) It is much faster for simple display and plotting.
(D) It is the only way to store point features.

112. An urban planner uses GIS to identify areas that are zoned for commercial use, have a slope of less than 5%, and are within 100 meters of a major road. This is an example of:
(A) Visual image interpretation.
(B) Application of multiple GIS operations.
(C) Simple data entry.
(D) Raster data compression.

113. Consider the following statements about GIS data formats:
1. Shapefile is a common vector data format.
2. GeoTIFF is a common raster data format.
3. KML is a format used to display geographic data in Earth browsers.
4. A shapefile is a single file containing all geometry and attribute information.
Which of the given statements are correct?
(A) 1 and 2 only
(B) 1, 2, and 3 only
(C) 3 and 4 only
(D) 1, 2, 3, and 4

114. Why is data input often considered the most costly and time-consuming component of a GIS project?
(A) Because GIS software licenses are prohibitively expensive.
(B) Because hardware powerful enough for GIS is rare.
(C) It involves digitizing, conversion, and extensive cleaning.
(D) Because non-spatial data is difficult to find.

115. A remote sensing image with a high radiometric resolution would be most useful for:
(A) Distinguishing subtle variations in water or vegetation stress.
(B) Identifying very small objects on the ground.
(C) Monitoring a location frequently.
(D) Covering a very large area in a single scene.

116. A chain code is a data compression method used for:
(A) Compressing an entire raster image using quadrant-based recursion.
(B) Representing the boundary of a region in a raster grid.
(C) Encoding topological relationships in a vector file.
(D) Storing attributes for polygon features.

117. Which of the following is a defining characteristic of the vector data model?
(A) It represents geographic space as an array of cells.
(B) It is best suited for representing continuous surfaces.

NODIA

grid.
(B) It enables advanced spatial analysis like network tracing.
(C) It ensures data integrity by preventing gaps between polygons.
(D) It helps in identifying adjacent and connected features efficiently.

99. The "MrSID" (Multiresolution Seamless Image Database) format is a well-known method for:
(A) Storing vector topology.
(B) Managing non-spatial attribute tables.
(C) Compressing large raster images.
(D) Defining map projections.

100. Consider the following types of data and information used in DRR:
1. Hospital locations
2. Coastal DEM
3. Flood satellite imagery
4. Census population density
5. Road network

Which of these can be effectively managed and analyzed within a GIS for disaster response planning?
(A) 3 and 5 only
(B) 1, 2 and 4 only
(C) 1, 3, and 5 only
(D) 1, 2, 3, 4, and 5

101. Arrange the steps of a typical digital image processing workflow in remote sensing in a logical sequence.
1. Image Classification
2. Data Acquisition
3. Pre-processing
4. Information Extraction

Choose the correct option:
(A) 1, 2, 3, 4
(B) 2, 1, 3, 4
(C) 2, 3, 1, 4
(D) 3, 2, 4, 1

102. Which of the following best describes the historical evolution of GIS?
(A) It evolved from mid-20th century land analysis systems.
(B) It started as a commercial mapping tool then became academic.
(C) It was developed solely for military purposes then declassified.
(D) It originated from ancient cartography without computer science.

103. In a GIS, the question "What is at this location?" is a query about:
(A) Spatial patterns
(B) Feature attributes
(C) Topological relationships
(D) Optimal paths

104. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : Healthy vegetation appears bright in near-infrared (NIR) satellite imagery.
Reason (R) : The cellular structure (spongy mesophyll) in healthy leaves strongly reflects NIR energy.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

105. A raster data compression technique that assigns a single value to a square block of cells if all cells in the block have the same value is called:
(A) Run-length code
(B) Block code
(C) Chain code
(D) Quadtree

106. In the context of vector data representation, what does a 'polygon' feature represent?
(A) A single location defined by x,y coordinates.
(B) A linear feature with a start and end point.
(C) A 2D area enclosed by a series of lines.
(D) A continuous surface like elevation.

107. The primary purpose of land use regulation in a disaster-prone area is to:
(A) Control population growth.
(B) Increase property taxes.
(C) Mitigate losses by controlling development in hazardous zones.
(D) Promote tourism.

108. Which of the following is a key national initiative in India for disaster management that heavily utilizes geospatial technology?

Click Here to Buy book on Amazon

objects.

128. Consider the following statements about GIS and DRR:
1. Risk analysis includes hazard probability and vulnerability.
2. Damage assessment using RS is only possible for floods.
3. Sustainable plans can incorporate hazard maps to guide construction.
4. Global initiatives promote data sharing for disaster management.
5. GIS can only be used after a disaster has occurred.

Which of the given statements are correct?
(A) 1, 2, and 3 only
(B) 1, 3, and 4 only
(C) 2, 4, and 5 only
(D) 1, 3, 4, and 5 only

129. What is the most appropriate use of a geostationary satellite in remote sensing?
(A) High-resolution mapping of polar ice caps.
(B) Frequent monitoring of weather patterns over a region.
(C) Detailed agricultural monitoring for high resolution.
(D) Spy missions requiring very low Earth orbits.

130. The philosophy of GIS is best described as an approach that:
(A) Prioritizes map aesthetics over data accuracy.
(B) Links geographic data with descriptive data for analysis.
(C) Replaces all forms of traditional cartography.
(D) Focuses solely on management of satellite images.

131. Which of the following is an example of a global initiative for Disaster Risk Management?
(A) UN-SPIDER Platform
(B) Local zoning ordinance
(C) University landslide project
(D) Private satellite launch

132. Match the items in List I with those in List II and select the correct option.
List I: (GIS Data Structure)
P. Run-length code
Q. Quadtree
R. Topology
S. Shapefile
List II: (Description)
1. Common, non-topological vector file format
2. Spatial relationships (adjacency, connectivity)
3. Raster compression by recursive subdivision
4. Raster compression for rows of identical values
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-2, S-1
(C) P-4, Q-1, R-2, S-3
(D) P-3, Q-4, R-1, S-2

133. The interaction of EMR where energy is bounced off a surface in a single, predictable direction is called:
(A) Specular reflectance
(B) Diffuse reflectance
(C) Scattering
(D) Absorption

NODIA

134. Which of the following is a key advantage of the vector data model?
(A) Simplicity of the data structure.
(B) Ease of analysis with continuous data.
(C) Efficient storage of boundaries and networks.
(D) Fast overlay operations in all circumstances.

135. Consider the following statements:
Statement I : Hazard evaluation focuses on understanding the physical characteristics and probability of a threatening event.
Statement II : Vulnerability assessment focuses on the socio-economic and physical susceptibility of a community to that event.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

136. Which of these is NOT a visual interpretation element for satellite images?
(A) Tone
(B) Texture
(C) Pattern
(D) Pixel Value

80. What is the cause-and-effect relationship between EMR interaction and spectral signatures?
(A) Unique spectral signatures cause EMR to interact through absorption and reflectance.
(B) Differential EMR interaction with materials results in unique spectral signatures.
(C) Identical reflection patterns in all materials create identical spectral signatures.
(D) Atmospheric scattering prevents spectral signatures from being measured from space.

81. A 'quadtree' is a data structure used in GIS for:
(A) Storing attribute data in a relational format.
(B) Compressing raster data by recursive subdivision.
(C) Defining the topological relationships in a vector network.
(D) Representing three-dimensional surfaces.

82. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The selection of a map projection is a critical step in a GIS project.
Reason (R) : Different map projections distort properties like area, shape, distance, or direction differently, and the choice depends on the purpose of the map.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

83. Which of the following is NOT a component of 'Risk' in the context of Disaster Risk Reduction (DRR)?
(A) Hazard
(B) Vulnerability
(C) Response Time
(D) Exposure

84. In the context of damage assessment using remote sensing, which of the following is a common technique?
(A) Counting the number of active cell phones in the affected area.
(B) Analyzing soil moisture content from before the event.
(C) Measuring the atmospheric pressure at the time of the disaster.
(D) Comparing pre- and post-disaster satellite images to detect changes.

85. Which of the following statements correctly identifies an advantage of a DBMS in a GIS context?
(A) It eliminates the need for spatial data models.
(B) It automatically converts raster data to vector data.
(C) It allows for efficient querying of large attribute datasets.
(D) It provides the primary tools for image interpretation.

86. Match the items in List I with those in List II and select the correct option.
List I: (Resolution Type)
P. Spatial
Q. Spectral
R. Temporal
S. Radiometric
List II: (Characteristic)
1. Revisit frequency
2. Number of bits for recording intensity
3. Size of the ground element (pixel)
4. Number and width of spectral bands
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-1, S-2
(C) P-3, Q-1, R-4, S-2
(D) P-4, Q-3, R-2, S-1

87. Which of the following is an example of applying GIS for hazard evaluation and zonation?
(A) A GIS is used to create a map showing population density.
(B) A GIS is used to store the contact information of emergency responders.
(C) A GIS is used to design a poster for a disaster awareness campaign.
(D) A GIS integrates data to delineate high landslide susceptibility.

88. Which statement best describes the difference between the Raster and Vector data models?
(A) Raster represents the world as a grid; Vector uses discrete features.
(B) Raster uses points and lines; Vector uses a grid of cells.

Downloaded from www.pdf.tube

146. A GIS analysis that calculates the steepness of terrain from a Digital Elevation Model (DEM) is creating a:
(A) Slope map
(B) Aspect map
(C) Hillshade map
(D) Contour map

147. Which of the following is NOT a phase of the disaster management cycle where RS & GIS can be applied?
(A) Mitigation
(B) Preparedness
(C) Response
(D) Instigation

148. Consider the following pairs of GIS concepts:
1. Raster - Grid of cells
2. Vector - Points/lines/polygons
3. Topology - Spatial relationships
4. Projection - Attribute data management

Which pair is incorrectly matched?
(A) 1
(B) 2
(C) 3
(D) 4

149. The ability of a sensor to distinguish between many shades of grey is determined by its:
(A) Radiometric resolution
(B) Spatial resolution
(C) Orbit height
(D) Spectral bandwidth

150. Arrange the following EMR types in order of decreasing energy per photon.
1. Microwave
2. Ultraviolet
3. Visible
4. Infrared

Choose the correct option:
(A) 1, 4, 3, 2
(B) 2, 3, 4, 1
(C) 3, 2, 1, 4
(D) 2, 4, 3, 1

151. What does the term 'digital image processing' in remote sensing encompass?
(A) The physical process of launching a satellite.
(B) Use of computers to manipulate digital sensor data.
(C) Chemical process of developing photographic film.
(D) Manual interpretation of printed satellite photos.

152. Consider the following statements:
Statement I : A shapefile, a common vector format, inherently stores topological information about adjacency and connectivity.
Statement II : A GIS coverage or geodatabase is required to explicitly store and use complex topological relationships.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is false, but Statement II is true.
(D) Statement I is true, but Statement II is false.

153. A raster data compression technique that works by dividing a raster into a hierarchy of quadrants is known as:
(A) Run-length encoding
(B) Quadtree
(C) Chain code
(D) Block code

154. Match the items in List I with those in List II and select the correct option.
List I: (Hazard Type)
P. Flood
Q. Landslide
R. Forest Fire
S. Earthquake

List II: (Typical RS & GIS Analysis)
1. Mapping active fire fronts and burn scars using thermal and NIR imagery.
2. Delineating susceptible zones using slope, geology, and land cover data.
3. Mapping ground shaking intensity and identifying damaged buildings.
4. Mapping the extent of inundation using radar or optical imagery.

(A) P-1, Q-3, R-2, S-4
(B) P-4, Q-1, R-3, S-2
(C) P-4, Q-2, R-1, S-3
(D) P-2, Q-4, R-1, S-3

155. Which of the following statements about map projections is correct?
(A) All map projections preserve area, shape, and distance.

NODIA

214. The term 'georeferencing' refers to the process of:
(A) Aligning geographic data to a known coordinate system.
(B) Converting vector data to raster data.
(C) Removing clouds from a satellite image.
(D) Compressing a raster file.

215. Consider the following statements:
Statement I : The raster data model represents the world using a tessellation of cells.
Statement II : The vector data model represents the world using coordinate-based points, lines, and polygons.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

216. A key advantage of using remote sensing for damage assessment is its ability to:
(A) Provide rapid coverage of large, inaccessible areas.
(B) Prevent the disaster from happening.
(C) Rebuild damaged structures automatically.
(D) Conduct detailed household-level economic surveys.

217. In the context of the EMR spectrum, which of the following has the longest wavelength?
(A) Blue light
(B) Green light
(C) Near-Infrared
(D) Red light

218. In GIS, which data model is more suitable for network analysis?
(A) Vector model
(B) Raster model
(C) Image model
(D) TIN model

219. Prohibiting construction in coastal zones identified as vulnerable is an application of:
(A) Mitigation
(B) Response
(C) Recovery
(D) Preparedness

220. Which of the following is NOT a type of scattering of EMR in the atmosphere?
(A) Rayleigh
(B) Mie
(C) Non-selective
(D) Specular

221. An 8-bit radiometric resolution sensor can record how many unique values of brightness?
(A) 256
(B) 8
(C) 64
(D) 1024

222. Which of the following is an example of spatial data?
(A) The location of a well, represented by coordinates.
(B) The name of a city.
(C) The population of a country.
(D) The average annual rainfall amount.

223. What is the fundamental concept behind raster data compression techniques like run-length encoding?
(A) Storing areas of same-valued pixels to reduce redundancy.
(B) Deleting every other pixel to reduce file size.
(C) Converting the raster data to vector format.
(D) Storing the data in a relational database.

224. Which of the following is the best example of a "Hazard Evaluation and Zonation" task?
(A) Mapping landslide risk areas using slope and rainfall data.
(B) Counting the number of collapsed buildings after an earthquake.
(C) Distributing relief supplies to a flood-affected population.
(D) Developing an early warning system for tsunamis.

225. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The vector data model is generally inefficient for representing continuous phenomena like elevation.
Reason (R) : Representing a continuous surface with vector data would require an extremely large number of points or contour

Click Here to Buy book on Amazon

(C) Hazard evaluation is post-disaster; risk assessment is pre-disaster.
(D) Hazard evaluation uses GIS; risk assessment uses only RS.

165. Which of the following is NOT an advantage of using a vector data model?
(A) Compact data structure for discrete objects.
(B) Precise representation of boundaries.
(C) Simplicity in representing continuous surfaces.
(D) Ability to store and use topology.

166. A remote sensing image where water appears black, and healthy vegetation appears bright red, has most likely been displayed as a:
(A) True color composite (Red=Red, Green=Green, Blue=Blue)
(B) False color composite (e.g., NIR=Red, Red=Green, Green=Blue)
(C) Panchromatic image
(D) Radar image

167. Consider the following statements:
Statement I : Run-length encoding is a raster compression technique.
Statement II : Run-length encoding is highly efficient for complex images where adjacent pixel values change frequently.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

168. Which of these is a direct application of GIS in sustainable land use regulation?
(A) Identifying parcels in flood hazard zones for restrictions.
(B) Publishing a newspaper article about the dangers of flooding.
(C) Monitoring air quality from a satellite.
(D) Designing the logo for the planning department.

169. What does the term "spectral response" of a material refer to?
(A) The speed at which EMR travels through the material.
(B) EMR reflected/absorbed/transmitted across wavelengths.
(C) The material's temperature change when exposed to sunlight.
(D) The weight of the material per unit volume.

170. Which of the following is a key reason for the historical development of GIS?
(A) Managing large volumes of info for resource planning.
(B) The invention of the telescope.
(C) The desire to create more artistic and colorful maps.
(D) The discovery of radio waves.

171. Which of the following characteristics describe an ACTIVE remote sensing system?
1. Measures reflected solar radiation
2. Has own energy source
3. Acquires data at night
4. RADAR example
5. Standard camera example.
(A) 1 and 5 only
(B) 2, 3, and 4 only
(C) 1, 3, and 5 only
(D) 2 and 5 only

172. "A system of hardware, software, data, people, and methods to capture, manage, and present geographically referenced data." This is:
(A) Remote Sensing
(B) Geographic Information System (GIS)
(C) Global Positioning System (GPS)
(D) Database Management System (DBMS)

173. What is the relationship between vulnerability and disaster risk?
(A) Higher vulnerability leads to higher risk if hazard is present.
(B) Higher vulnerability leads to lower risk.
(C) Vulnerability is unrelated to risk.
(D) Vulnerability is another term for hazard.

174. Which of the following correctly pairs a data model with its basic element?
(A) Raster - Polygon
(B) Vector - Pixel
(C) Raster - Grid Cell
(D) Vector - Surface

175. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).

Downloaded from www.pdf.tube

(B) A projection is necessary to display 3D Earth on a 2D map.
(C) The choice of projection does not affect spatial analysis.
(D) Geographic systems (lat/long) are projected coordinate systems.

156. The use of pre- and post-event satellite imagery to identify changes on the ground is a cornerstone of:
(A) Hazard zonation
(B) Vulnerability assessment
(C) Damage assessment
(D) Risk modeling

157. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The distinction between spatial and non-spatial data is fundamental to GIS.
Reason (R) : GIS technology is uniquely powerful because it links descriptive non-spatial data (attributes) to location-based spatial data, enabling location-based queries and analysis.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

158. Which of the following is an example of a 'many-to-one' relationship in a GIS database?
(A) A single state has a single capital city.
(B) Many cities are located within a single state.
(C) Each country has its own unique flag.
(D) A parcel of land has a unique owner.

159. The scattering caused by particles like pollen, dust, and smoke, which have diameters roughly equivalent to the EMR wavelength, is:
(A) Rayleigh scattering
(B) Compton scattering
(C) Mie scattering
(D) Non-selective scattering

160. Consider the following statements about data input in GIS:
1. Digitizing converts paper map features into digital format.
2. Scanning a map produces a vector file directly.
3. GPS is a common source of accurate coordinate data for GIS.
4. Data input is typically the quickest and cheapest project phase.

Which of the given statements are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2 and 3 only
(D) 2, 3 and 4 only

NODIA

161. What is the effect of absorption on electromagnetic radiation as it passes through the atmosphere?
(A) It converts energy into another form, reducing intensity.
(B) It changes the direction of the radiation unpredictably.
(C) It enhances the energy of the radiation at specific wavelengths.
(D) It has no effect on the radiation's intensity or direction.

162. A key component of a vector data structure that explicitly defines spatial relationships like adjacency and connectivity is called:
(A) Topology
(B) An attribute
(C) A coordinate
(D) A legend

163. A remote sensing satellite with 10m spatial resolution and 3-day temporal resolution is tasked with monitoring crop health. Which of the following is a limitation the analyst might face?
(A) Pixels are too coarse for individual plants but fit field analysis.
(B) Revisit time might be too long to catch rapid pest infestation.
(C) The spatial resolution is too high for agricultural purposes.
(D) The temporal resolution is too frequent, resulting in excess data.

164. What is the fundamental difference between 'hazard evaluation' and 'risk assessment' in DRR?
(A) They are identical concepts.
(B) Hazard evaluation assesses phenomena; risk adds vulnerability.

184. A sensor that can detect energy in the blue, green, red, and near-infrared portions of the spectrum is best described as:
(A) Multispectral
(B) Panchromatic
(C) Hyperspectral
(D) Radar

185. What is the primary purpose of a "geometric transformation" of a satellite image?
(A) To classify the pixels into land cover types.
(B) To correct distortions and register image to projection.
(C) To enhance the colors in the image.
(D) To reduce the file size of the image.

186. Which statement accurately describes an advantage of a relational DBMS in a GIS context?
(A) It handles the storage of raster data more efficiently.
(B) It provides tools for multi-user editing and complex queries.
(C) It eliminates the need for users to understand SQL.
(D) It automatically creates topological relationships for vector.

187. Which of the following statements about Hazard Zonation is incorrect?
(A) It involves delineating areas by level of hazard potential.
(B) It is a critical input for land use planning.
(C) It is solely based on socio-economic data.
(D) It can be performed for various natural hazards.

188. A satellite with a high temporal resolution is most suitable for which application?
(A) Monitoring daily changes in sea ice extent.
(B) Creating a one-time detailed city base map.
(C) Identifying small archaeological sites.
(D) Measuring the precise elevation of terrain.

189. Consider the following statements:
Statement I : A GIS is simply a tool for making maps.
Statement II : The power of GIS lies in spatial analysis via data integration.
Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is false, but Statement II is true.
(D) Statement I is true, but Statement II is false.

190. What is a "sun-synchronous orbit" particularly useful for?
(A) Imagery acquired under consistent illumination conditions.
(B) Continuous weather monitoring of one hemisphere.
(C) Telecommunications and broadcasting.
(D) High-altitude planetary exploration.

191. In a vector data file, what information is fundamentally associated with a "point" feature?
(A) A single x,y coordinate pair.
(B) A sequence of connected coordinate pairs.
(C) A closed loop of coordinate pairs.
(D) A grid cell value.

192. Arrange the following platforms in order of altitude, lowest to highest.
1. Manned Aircraft
2. Geostationary
3. Sun-synchronous
4. Kite/Balloon

Choose the correct option:
(A) 4, 1, 3, 2
(B) 1, 4, 3, 2
(C) 4, 3, 1, 2
(D) 2, 3, 1, 4

193. The concept of "topology" in GIS is least relevant for which of the following tasks?
(A) Finding all parcels adjacent to a specific parcel.
(B) Planning a route through a street network.
(C) Ensuring polygons cover an area without gaps.
(D) Draping an image over 3D terrain for visualization.

194. Which of the following is a primary disadvantage of the raster data model?
(A) Inefficient for discrete objects due to boundary generalization.
(B) It cannot represent continuous data.
(C) The data structure is very complex.
(D) It does not allow for attribute data to be linked to cells.

Click Here to Buy book on Amazon

Which of the following is correct?
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is false, but Statement II is true.
(D) Statement I is true, but Statement II is false.

236. A key contribution of remote sensing to damage assessment is its ability to provide a synoptic view, which means:
(A) A view that is always in true color.
(B) A view that is captured at night.
(C) A highly magnified, detailed view of a small area.
(D) A view that shows a large area at once.

237. Which of the following is a primary advantage of the raster data model?
(A) High precision in representing boundaries.
(B) Simple grid structure and ease of computational overlay.
(C) Small data storage requirements.
(D) Explicit storage of topological relationships.

238. In a vector data structure, a road network would be best represented by:
(A) A set of polygon features.
(B) A set of point features.
(C) A raster grid.
(D) A set of line features with topological connectivity.

239. The interaction of sunlight with very small molecules in the upper atmosphere is predominantly:
(A) Rayleigh scattering
(B) Mie scattering
(C) Non-selective scattering
(D) Absorption by water vapor

240. The philosophy behind using GIS for land use planning is to:
(A) Create a single, unchangeable master plan.
(B) Enable dynamic analysis and modeling via integration.
(C) Replace the need for public consultation.
(D) Focus solely on the economic aspects of development.

241. Which of the following is an example of a cause-and-effect relationship in DRR?
(A) Earthquake occurs under a city; damage to buildings is observed.
(B) Government issues an order; an earthquake occurs.
(C) Satellite captures an image; the population increases.
(D) GIS map of a flood is created; the flood waters recede.

242. Arrange the following GIS tasks in a logical project workflow.
1. Define objectives
2. Pre-process data
3. Spatial analysis
4. Present results.

(A) 1, 2, 3, 4
(B) 2, 1, 3, 4
(C) 3, 2, 1, 4
(D) 1, 3, 2, 4

243. The "Quadtree" data structure is primarily used for:
(A) Compressing raster data.
(B) Storing network topology.
(C) Defining map projections.
(D) Managing attribute tables.

244. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : GIS is a powerful tool for vulnerability assessment.
Reason (R) : GIS can overlay layers of socio-economic data on top of hazard maps to identify which communities are most susceptible.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

245. Which of the following is NOT a characteristic of a vector data model?
(A) Uses points, lines, and polygons.
(B) Can store topological information.
(C) Good for representing discrete features.
(D) Represents space as a grid of cells.

246. A satellite's ability to distinguish between rock types based on unique reflectance patterns is due to its:

4. Sequential value/count.
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-1, R-3, S-2
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-4, R-1, S-3

205. In damage assessment, comparing optical before images with radar during flood images is effective because:
(A) Radar penetrates clouds; smooth water surfaces appear dark.
(B) The optical image shows the temperature of the water.
(C) Radar signals are strongly reflected by vegetation.
(D) The SAR image provides a true-color representation.

206. Which of the following is an example of a "national initiative for Disaster Risk Management"?
(A) Establishing a central agency like NDMA to coordinate efforts.
(B) An international treaty on climate change.
(C) A single NGO's community awareness program.
(D) Development of new GIS software by a private company.

207. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).
Assertion (A) : The process of data input and editing is often the most resource-intensive part of establishing a GIS.
Reason (R) : Acquiring accurate data and converting it into a usable digital format requires significant time and labor.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

208. The main purpose of a map projection in GIS is to:
(A) Represent the 3D surface of the Earth on a 2D map.
(B) Convert raster data to vector.
(C) Store attribute data.
(D) Improve the radiometric resolution of an image.

209. What is meant by the 'temporal resolution' of a satellite sensor?
(A) The time of day the image is acquired.
(B) The time it takes to process the image.
(C) Time interval between acquisitions of the same area.
(D) The time period over which the sensor is operational.

210. Consider the following statements about GIS data models:
1. Vector is ideal for discrete entities with boundaries.
2. Raster is ideal for continuous fields like elevation.
3. Topological relationships are inherent in raster.
4. Vector represents space using points, lines, and polygons.

Which of the given statements are correct?
(A) 1, 2, and 3 only
(B) 1, 2, and 4 only
(C) 2, 3, and 4 only
(D) 1, 3, and 4 only

211. Which of the following is NOT a fundamental component of GIS?
(A) Data
(B) People
(C) Internet Connection
(D) Methods

212. In remote sensing, what does a spectral signature graph typically plot?
(A) Reflectance vs. Wavelength
(B) Time vs. Spatial Resolution
(C) Radiometric Resolution vs. Pixel Size
(D) Altitude vs. Ground Speed

213. A city government uses a GIS to analyze crime data to identify hotspots. This is an application of:
(A) Spatial pattern analysis
(B) Network analysis
(C) Geocoding
(D) Hydrological modeling

Downloaded from www.pdf.tube

195. Given below are two statements, one is labelled as Assertion (A) and the other is labelled as Reason (R).

Assertion (A) : In remote sensing, different types of resolutions are often in a trade-off relationship.

Reason (R) : For a satellite system with a fixed data transmission capacity, improving one type of resolution often requires a compromise in another.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

196. The Energy Balance Equation states that incident EMR on a surface is partitioned into:
(A) Reflection, Absorption, and Transmission
(B) Reflection, Absorption, and Refraction
(C) Scattering, Absorption, and Transmission
(D) Scattering, Reflection, and Refraction

197. Which of the following is the most accurate description of the philosophy of GIS?
(A) A framework for analyzing phenomena in geographic space.
(B) A focus on creating static, printed maps.
(C) A method for storing data without any spatial reference.
(D) A tool for editing digital photographs.

198. Which of these demonstrate the use of RS/GIS for Disaster Risk Reduction?
1. Vegetation loss after fire
2. Floodwater simulation
3. Evacuation route mapping
4. Identifying vulnerable populations
5. Regulating construction in landslide zones.

(A) 1 and 2 only
(B) 3, 4, and 5 only
(C) 1, 2, 3, and 4 only
(D) 1, 2, 3, 4, and 5

199. What does it mean for a GIS to be 'topology-based'?
(A) It stores info about connectivity, adjacency, and containment.
(B) It means the GIS can only store topographical maps.
(C) It means the GIS uses a raster data model exclusively.
(D) It means the GIS can create 3D visualizations.

200. Which type of EMR interaction with the atmosphere is responsible for clouds appearing white?
(A) Non-selective scattering
(B) Rayleigh scattering
(C) Mie scattering
(D) Absorption

201. Which component of a GIS is responsible for managing large datasets, especially attribute data?
(A) The central processing unit (CPU).
(B) The graphics card.
(C) The Database Management System (DBMS).
(D) The map projection engine.

202. Which of the following is a key advantage of the raster data model in GIS?
(A) Grid structure makes overlay and math operations easy.
(B) It provides a very precise representation of linear features.
(C) It has a very compact structure for homogeneous polygons.
(D) It inherently stores topological relationships between objects.

203. The term "spatial data model" in GIS refers to:
(A) Formal means of representing spatial info digitally.
(B) The method used to store non-spatial attributes.
(C) The specific map projection used for a dataset.
(D) The physical model of the satellite sensor.

NODIA

204. Match the items in List I with those in List II and select the correct option.

List I: (Compression)
P. Run-length
Q. Chain coding
R. Quadtree
S. Block coding

List II: (Method)
1. Boundary sequence vectors
2. Rectangle block value
3. Recursive quadrant division

lines, resulting in large file sizes.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

226. The historical evolution of GIS was significantly propelled by advances in which field?
(A) Computer Science
(B) Philosophy
(C) Literature
(D) Maritime navigation

227. In satellite image interpretation, 'texture' refers to:
(A) Frequency of tonal change and pixel arrangement.
(B) The overall lightness or darkness of an area.
(C) The arrangement of objects in an image.
(D) The recognizable shape of an object.

228. Which of the following is a primary disadvantage of the vector data model?
(A) Overlay operations can be computationally intensive.
(B) Inability to represent discrete boundaries precisely.
(C) The data structure is inherently simple and lacks detail.
(D) It is unsuitable for network analysis.

229. Consider the following statements about satellite orbits:
1. Geostationary orbit remains fixed over the equator.
2. Sun-synchronous orbit passes at the same local solar time.
3. Geostationary orbits are ideal for high-resolution mapping.
4. Sun-synchronous orbits are ideal for vegetation monitoring.
5. All satellites orbit in a perfect circle.

Which of the given statements are correct?
(A) 1, 2, and 4 only
(B) 2, 3, and 5 only
(C) 1, 3, and 4 only
(D) 1, 2, 4, and 5 only

230. The definition of GIS emphasizes the linking of spatial data with:
(A) Non-spatial (attribute) data
(B) Only other spatial data
(C) A specific computer brand
(D) A single map projection

231. The term 'Risk' in DRR is a function of Hazard and:
(A) Vulnerability
(B) Response
(C) Recovery
(D) Technology

232. Match the items in List I with those in List II and select the correct option.
List I: (Task)
P. Weather changes
Q. Property boundary
R. Crop stress
S. Susceptibility zones
List II: (Tech)
1. Vector model
2. Temporal Res
3. Overlay analysis
4. Spectral signature.
(A) P-1, Q-2, R-3, S-4
(B) P-2, Q-1, R-4, S-3
(C) P-4, Q-3, R-2, S-1
(D) P-2, Q-4, R-1, S-3

233. The concept that incoming solar radiation at the Earth's surface must be reflected, absorbed, or transmitted is known as the:
(A) Law of Thermodynamics
(B) Doppler Effect
(C) Energy Balance Equation
(D) Photoelectric Effect

234. In the context of GIS, "topology" refers to the:
(A) Study of the Earth's surface features.
(B) The brightness values of pixels in a raster.
(C) The scale of a map.
(D) Spatial relationships preserved under geometric transformation.

235. Consider the following statements:
Statement I : Raster data files are always smaller in size than vector data files.
Statement II : Vector data is generally more precise for representing discrete boundaries.

Click Here to Buy book on Amazon

Assertion (A) : Atmospheric windows are essential for satellite-based remote sensing of the Earth's surface.

Reason (R) : Sensors are designed to detect EMR in wavelength bands where the atmosphere is transparent, minimizing absorption and scattering that would obscure the signal from the surface.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

176. Which of the following is the most significant technique to represent a continuous variable like elevation in a GIS?
(A) A single point feature.
(B) A raster grid where each cell stores an elevation value.
(C) A polygon feature representing the study area boundary.
(D) A non-spatial attribute table.

177. A key function of topology in a vector GIS is to:
(A) Improve the visual appearance of a map.
(B) Reduce the file size of raster data.
(C) Ensure logical consistency and enable spatial analysis.
(D) Assign colors to different feature classes.

178. A fire department uses a GIS to map the locations of fire hydrants and determine which houses are within 300 meters of a hydrant. This is an application of:
(A) Disaster Mitigation
(B) Disaster Recovery
(C) Disaster Response
(D) Disaster Preparedness

179. Match the items in List I with those in List II and select the correct option.
List I: (RS Term)
P. Passive Sensor
Q. Active Sensor
R. Spectral Signature
S. Atmospheric Window
List II: (Brief Definition)
1. Wavelength-dependent reflectance pattern of an object.
2. Transmits and receives its own EMR.
3. Wavelength region of high atmospheric transmittance.
4. Records naturally available EMR.
(A) P-4, Q-2, R-1, S-3
(B) P-2, Q-4, R-3, S-1
(C) P-4, Q-1, R-2, S-3
(D) P-1, Q-2, R-3, S-4

180. The process of representing a real-world object (e.g., a lake) as a polygon in a vector GIS is an act of:
(A) Abstraction and representation
(B) Data compression
(C) Rasterization
(D) Georeferencing

181. In the context of EMR, what is the relationship between wavelength and frequency?
(A) They are inversely proportional.
(B) They are directly proportional.
(C) They are not related.
(D) Wavelength is the square of the frequency.

182. Consider the following statements about raster data compression:
1. Run-length encoding stores sequences of identical values.
2. Quadtree involves recursive quadrant division.
3. Chain codes represent region boundaries.
4. MrSID is a wavelet-based format for large images.

Which of the given statements are correct?
(A) 1 and 2 only
(B) 1, 2 and 3 only
(C) 3 and 4 only
(D) 1, 2, 3 and 4

183. If a disaster manager wants to know "How many people live in the 100-year floodplain?", what two primary GIS layers would they need to overlay?
(A) A road network map and a satellite image.
(B) A floodplain boundary and a census map with population data.
(C) A soil map and a geology map.
(D) A river network map and a hospital location map.

NODIA

(A) High temporal resolution
(B) High spatial resolution
(C) Appropriate spectral resolution
(D) Geostationary orbit

247. The primary goal of geometric transformation on vector or raster data is to:
(A) Place data in a correct real-world coordinate space.
(B) Change the file format.
(C) Reduce the file size.
(D) Enhance the visual contrast.

248. Which of the following is the most accurate statement regarding the role of DBMS in GIS?
(A) A DBMS is primarily used for creating map layouts.
(B) A DBMS manages non-spatial attribute components.
(C) A DBMS is a hardware component for GIS software.
(D) A DBMS is only used for storing raster data.

249. Consider the following statements about RS and GIS for DRR:
1. RS is used for damage assessment.
2. GIS is used for zonation via causal factors.
3. Risk is product of hazard and vulnerability.
4. Land use planning utilizes GIS regulations.
5. RS and GIS only used in response phase.

Which of the given statements are correct?
(A) 1, 2, 3 and 4 only
(B) 2, 3, 4 and 5 only
(C) 1, 3 and 5 only
(D) All of the above

250. Which of the following best describes the historical evolution of remote sensing?
(A) Progressed from ground to aerial then to space platforms.
(B) It began with digital satellites and later moved to aerial.
(C) It has always been an exclusively military technology.
(D) It was invented simultaneously with the first GIS.

Direction : Please read the following source carefully.

The field of Remote Sensing, defined as the science and art of obtaining information about an object, area, or phenomenon through the analysis of data acquired by a device that is not in contact with the object under investigation, has undergone significant development throughout its history. Its foundational principles are rooted in the measurement of electromagnetic radiation that is reflected or emitted from a target. The conceptual framework involves a source of energy, a propagation path through the atmosphere, interaction with a target on the Earth's surface, and detection by a sensor. The progression of this discipline has been marked by a shift from rudimentary aerial photography to sophisticated satellite-based digital sensors, expanding its application across various scientific domains. The core concept remains consistent: to interpret the properties of the Earth's surface features by analysing the characteristics of the EMR they interact with. This principle allows for the monitoring and analysis of large-scale phenomena and inaccessible areas, forming the basis of modern Earth observation and environmental science. The historical evolution showcases a continuous refinement of technology and analytical methods to extract more precise and meaningful information without direct physical engagement.

Based on the above source, attempt the following five questions.

251. According to the provided text, what is the fundamental principle of Remote Sensing?
(A) The physical contact between a sensor and the object of study.
(B) The analysis of data acquired by a device not in contact with the target.
(C) The historical development of aerial photography techniques.
(D) The exclusive use of satellite-based digital sensors for data collection.

252. Which of the following is NOT described as part of the conceptual framework of Remote Sensing in the passage?
(A) In-situ measurement and sampling of the target.
(B) A source of energy.
(C) Interaction of EMR with a target.
(D) Detection of energy by a sensor.

NODIA

265. One can infer from the text that if an atmospheric window did not exist for a particular wavelength, then:
(A) the energy at that wavelength would likely be absorbed or scattered by the atmosphere.
(B) sensors could easily detect that wavelength from space.
(C) that wavelength would be ideal for remote sensing of the Earth's surface.
(D) the atmosphere would be completely transparent to that specific wavelength.

Direction : Please read the following source carefully.

Upon reaching the Earth's surface, Electromagnetic Radiation (EMR) that has traversed the atmosphere undergoes further interaction with various features. This interaction is governed by the 'Energy Balance Equation', which posits that the total incident energy upon a surface is partitioned into three components: reflectance, absorption, and transmittance. For most remote sensing applications, reflected energy is the primary component of interest. The proportion of energy reflected at different wavelengths is known as the 'spectral response' of a feature. When this response is plotted over a range of wavelengths, it forms a unique curve or pattern called a 'spectral signature'. This signature is a key concept in remote sensing, as different materials, such as water, soil, and vegetation, exhibit distinct patterns of reflectance across the spectrum. For example, healthy vegetation strongly reflects near-infrared energy but absorbs red light. This differential spectral response allows for the identification and discrimination of various surface materials and their conditions. The uniqueness of a spectral signature for a given feature is fundamental to image interpretation and classification, enabling analysts to translate raw radiance values captured by a sensor into meaningful thematic maps of the landscape.

Based on the above source, attempt the following five questions.

266. What does the "Energy Balance Equation" describe in the context of the passage?
(A) The total energy generated by the sun.
(B) The partitioning of incident EMR into reflected, absorbed, and transmitted components.
(C) The energy lost due to atmospheric scattering.
(D) The balance between spatial and temporal resolution.

267. A "spectral signature" is best defined as:
(A) the total amount of energy incident upon a surface.
(B) a pattern of spectral response plotted over a range of wavelengths for a feature.
(C) the energy absorbed by a feature at a single wavelength.
(D) a component of the energy balance equation related to transmission.

268. According to the text, why is the concept of a spectral signature crucial for remote sensing?
(A) Because it allows for the identification and differentiation of various surface materials.
(B) Because all surface materials share the exact same spectral signature.
(C) Because it measures only the energy absorbed by an object.
(D) Because it is independent of the wavelength of the EMR.

269. The passage provides an example of a spectral response for healthy vegetation. This example illustrates that healthy vegetation:
(A) reflects near-infrared and red light equally.
(B) absorbs both near-infrared energy and red light.
(C) strongly reflects near-infrared energy and absorbs red light.
(D) strongly absorbs near-infrared energy and reflects red light.

270. Based on the source, what is the 'spectral response' of a feature?
(A) The unique curve formed when reflectance is plotted against wavelength.
(B) The total incident energy upon the feature.
(C) The process of converting raw radiance values into a thematic map.
(D) The proportion of energy reflected by the feature at different wavelengths.

Direction : Please read the following source carefully.

The utility of satellite imagery in remote sensing is profoundly influenced by four key types of

Downloaded from www.pdf.tube

about the Earth's surface.
(B) Its application is limited by the presence of cloud cover.
(C) It has a distinct advantage in all-weather remote sensing.
(D) It is primarily used for analysing vegetation health.

260. The analytical power of remote sensing, as described in the passage, stems from its ability to:
(A) selectively sense in specific wavelength regions to differentiate surface features.
(B) sense the entire electromagnetic spectrum simultaneously with a single sensor.
(C) use only the visible light that is also perceived by the human eye.
(D) ignore the wave-like characteristics of electromagnetic energy.

Direction : Please read the following source carefully.

The journey of Electromagnetic Radiation (EMR) from its source to a remote sensor is significantly influenced by its interaction with the Earth's atmosphere. As EMR propagates through the atmosphere, it is subject to several processes, primarily absorption, reflectance, and scattering. Absorption is the process by which atmospheric constituents, such as water vapor, carbon dioxide, and ozone, absorb EMR at specific wavelengths, effectively preventing it from reaching the sensor. Scattering is the redirection of EMR from its original path due to its interaction with atmospheric particles and gas molecules. The type and amount of scattering depend on the size of the particles relative to the wavelength of the radiation. This atmospheric interference is not uniform across the entire electromagnetic spectrum. Consequently, there are specific wavelength bands where the atmosphere is relatively transparent, allowing EMR to pass through with minimal attenuation. These bands are known as 'Atmospheric Windows'. The existence of these windows is crucial for remote sensing, as sensors must be designed to operate within these specific regions to effectively receive the signal reflected or emitted from the Earth's surface. Without these windows, most remote sensing activities would be impossible as the information-carrying energy would be lost to atmospheric absorption and scattering.

Based on the above source, attempt the following five questions.

261. What are "Atmospheric Windows" as described in the passage?
(A) Regions in the spectrum where the atmosphere completely blocks EMR.
(B) Physical openings in the cloud cover that allow sunlight to pass through.
(C) Processes by which atmospheric gases absorb and scatter radiation.
(D) Wavelength bands where EMR can pass through the atmosphere with little interference.

NODIA

262. According to the text, what is the primary consequence of atmospheric absorption?
(A) It redirects EMR from its original path.
(B) It prevents EMR at certain wavelengths from reaching the sensor.
(C) It enhances the signal received from the Earth's surface.
(D) It makes the atmosphere transparent across all wavelengths.

263. The passage indicates that the process of scattering involves:
(A) the absorption of energy by atmospheric gases like ozone.
(B) the passage of EMR through the atmosphere without any alteration.
(C) the redirection of EMR by particles and molecules in the atmosphere.
(D) the emission of new radiation by the atmosphere itself.

264. Based on the passage, why is it essential for remote sensors to be designed to operate within atmospheric windows?
(A) Because these windows contain the highest concentration of atmospheric gases.
(B) Because scattering and absorption are at their maximum within these windows.
(C) Because these are the only regions where EMR is generated.
(D) Because EMR is subject to the least amount of atmospheric attenuation in these bands.

five questions.

276. What is the core philosophical idea behind a Geographic Information System (GIS) as described in the passage?
(A) To integrate diverse datasets using geographic location as a common link.
(B) To create maps using only manual cartographic techniques.
(C) To separate spatial and non-spatial data into disconnected systems.
(D) To focus exclusively on the hardware components of data processing.

277. According to the text, which of the following represents an example of non-spatial data?
(A) The coordinates of a school building.
(B) The polygon defining a lake's boundary.
(C) The line representing a river's course.
(D) The name and student population of a school.

278. The passage identifies "people" as one of the key components of a GIS. This implies that:
(A) GIS is a fully automated system requiring no human intervention.
(B) the effectiveness of a GIS depends on the expertise of its users.
(C) "people" refers to the population data being analyzed in the system.
(D) the system is designed exclusively for demographic analysis.

279. How does the source differentiate between spatial and non-spatial data?
(A) Spatial data describes characteristics, while non-spatial data describes location.
(B) Both data types describe location, but at different scales.
(C) Spatial data describes location, while non-spatial data describes characteristics.
(D) There is no fundamental distinction made between the two in a GIS.

280. Which of the following is NOT listed in the passage as a component of a GIS?
(A) Hardware.
(B) Data.
(C) Methods.
(D) Global Positioning Systems.

Direction : Please read the following source carefully.

In Geographic Information Systems, spatial data is primarily represented using two fundamental data models: raster and vector. The raster data model represents the world as a surface divided into a regular grid of cells, or pixels. Each cell in the grid holds a value representing a characteristic of that location, such as elevation or land use class. This model is particularly well-suited for representing continuous phenomena like temperature or elevation surfaces. However, a significant disadvantage is that high resolution can lead to very large file sizes, and discrete features can have jagged, "blocky" boundaries. Conversely, the vector data model represents geographic features with discrete boundaries using points, lines, and polygons. A point represents a single location, a line represents a linear feature like a road or river, and a polygon represents an area like a lake or a parcel of land. The main advantage of the vector model is its ability to represent features with high precision and its more compact data structure for discrete objects. Its primary disadvantage lies in its difficulty in representing continuous surfaces and the complexity of certain spatial analyses, such as overlay operations, compared to the simpler cell-by-cell operations in the raster model. The choice between raster and vector models depends largely on the nature of the data being represented and the type of analysis to be performed.

Based on the above source, attempt the following five questions.

281. Which spatial data model is described as being most suitable for representing continuous phenomena like elevation?
(A) The raster model.
(B) The vector model.
(C) The topological model.
(D) The attribute model.

282. According to the passage, a significant disadvantage of the raster data model is:
(A) its inability to represent continuous surfaces.
(B) the potential for large file sizes and "blocky" feature representation.
(C) its compact file size regardless of resolution.
(D) the precise representation of discrete feature boundaries.

Click Here to Buy book on Amazon

resolution: spectral, spatial, temporal, and radiometric. Spectral resolution refers to the number and width of the specific wavelength bands that a sensor can detect. Higher spectral resolution enables finer discrimination between different materials based on their spectral signatures. Spatial resolution determines the smallest object that can be resolved on the ground, essentially the size of the pixel in a digital image. Temporal resolution is related to the frequency with which a satellite revisits a particular location, which is critical for monitoring dynamic processes like crop growth or urban expansion. Finally, radiometric resolution defines the sensitivity of a sensor to differences in electromagnetic energy, dictating its ability to discern subtle variations in brightness or radiance. These resolution characteristics are interdependent and often involve trade-offs. The overall system involves a satellite, which acts as a platform, carrying a sensor, the instrument that actually captures the EMR. The satellite follows a specific orbit designed for its mission objectives. The resulting satellite image is a digital representation of the Earth's surface that requires various interpretation techniques, both visual and digital, to extract meaningful information.

Based on the above source, attempt the following five questions.

271. Which type of resolution is defined by the sensor's sensitivity to differences in electromagnetic energy?
(A) Spatial resolution.
(B) Temporal resolution.
(C) Radiometric resolution.
(D) Spectral resolution.

272. A remote sensing project aimed at monitoring the daily changes in a flooded area would require a high:
(A) radiometric resolution.
(B) temporal resolution.
(C) spectral resolution.
(D) spatial resolution.

273. According to the passage, what is the primary role of the satellite in the remote sensing system?
(A) To interpret the digital image.
(B) To determine the radiometric resolution.
(C) To serve as the source of electromagnetic radiation.
(D) To act as the platform carrying the sensor.

274. The ability of a sensor to distinguish between different types of vegetation based on their unique reflectance in narrow wavelength bands is a function of its:
(A) spectral resolution.
(B) orbit.
(C) temporal resolution.
(D) interpretation technique.

NODIA

275. The passage describes spatial resolution as the characteristic that determines:
(A) the frequency of satellite revisits.
(B) the number of wavelength bands detected.
(C) the size of the smallest discernible object on the ground.
(D) the sensitivity to variations in brightness.

Direction : Please read the following source carefully.

A Geographic Information System (GIS) is fundamentally defined as a system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data. The philosophy behind GIS is rooted in the idea of integrating disparate datasets through the common element of geographic location, enabling a deeper understanding of spatial patterns and relationships. The historical evolution of GIS traces back to early computerized mapping efforts, blossoming into the powerful analytical tool it is today. A critical distinction within GIS is between spatial and non-spatial data. Spatial data describes the absolute and relative location of geographic features (the 'where'), while non-spatial data, often called attribute data, describes the characteristics of those features (the 'what,' 'how much,' or 'when'). For example, a road's location is spatial data, whereas its name, surface type, and traffic volume are non-spatial data. A functioning GIS is composed of several key components working in concert: hardware (computers, digitizers), software (the GIS application), data (both spatial and non-spatial), the people who operate the system, and the methods or procedures used for analysis. The synergy of these components allows GIS to move beyond simple map-making into complex spatial problem-solving.

Based on the above source, attempt the following

253. Based on the passage, the historical development of Remote Sensing is best characterized by:
(A) a complete replacement of its foundational principles over time.
(B) a reduction in its application across scientific domains.
(C) a technological progression from simple photography to advanced digital systems.
(D) a focus on maintaining contact with the object of investigation.

254. The passage implies that a primary advantage of Remote Sensing is its ability to:
(A) provide information about small, easily accessible laboratory samples.
(B) analyse targets with which direct physical interaction is required.
(C) limit the interpretation of data to only emitted electromagnetic radiation.
(D) monitor large-scale phenomena and areas that are difficult to reach.

255. What does the passage define as the "science and art" of Remote Sensing?
(A) The process of launching satellites into specific orbits.
(B) The manufacture of high-resolution digital sensors.
(C) The acquisition and analysis of information without direct contact.
(D) The development of new sources of electromagnetic energy.

Direction : Please read the following source carefully.

Electromagnetic Radiation (EMR) is the cornerstone of remote sensing, serving as the carrier of information from the Earth's surface to the sensor. The characteristics of EMR are pivotal; it is a form of energy that propagates through space in the form of waves, defined by properties such as wavelength and frequency. The electromagnetic spectrum is the continuous range of all possible wavelengths of EMR, which is segmented into different wavelength regions. Each region holds specific significance for remote sensing applications. For instance, the visible region is crucial for identifying features discernible to the human eye, while the infrared regions are vital for detecting thermal properties, vegetation health, and moisture content. Other regions, like microwaves, have the unique ability to penetrate clouds and are used for applications like radar remote sensing. The significance of these distinct wavelength regions lies in their differential interaction with various materials on the Earth's surface. By selectively sensing in different parts of the spectrum, it becomes possible to identify and differentiate between objects and phenomena that might appear identical in one region but are clearly distinct in another. This selective sensing capability is what gives remote sensing its analytical power.

Based on the above source, attempt the following five questions.

256. What is described in the passage as the fundamental carrier of information in remote sensing?
(A) The Earth's atmosphere.
(B) Electromagnetic Radiation.
(C) The satellite sensor itself.
(D) The propagation of sound waves.

257. According to the text, why is the segmentation of the electromagnetic spectrum into different regions significant for remote sensing?
(A) Because all regions interact with Earth's materials in an identical manner.
(B) Because each region offers a uniform and non-differential view of the surface.
(C) Because only the visible region contains useful information for analysis.
(D) Because different regions provide unique information due to their differential interaction with materials.

258. The passage suggests that the infrared wavelength region is particularly significant for which type of analysis?
(A) Detecting thermal properties and vegetation status.
(B) Assessing cloud penetration capabilities.
(C) Identifying features as they appear to the human eye.
(D) Exclusively for radar remote sensing applications.

259. Based on the information provided, what can be inferred about the microwave region of the EMR spectrum?
(A) It is incapable of providing information

Downloaded from www.pdf.tube

283. In the vector data model, a feature such as a single well would most appropriately be represented by:
(A) a polygon.
(B) a point.
(C) a raster cell.
(D) a line.

284. What is identified in the text as an advantage of the vector data model?
(A) Its precise representation of discrete features and compact data structure.
(B) Its simplicity in performing overlay operations.
(C) Its suitability for representing continuous temperature data.
(D) Its use of a regular grid of cells to store information.

285. Based on the passage, the choice between using a raster or vector model primarily depends on:
(A) the software brand being used for the analysis.
(B) the personal preference of the GIS analyst.
(C) the nature of the data and the intended analysis.
(D) the available computer hardware only.

Direction : Please read the following source carefully.

The representation of raster data involves a specific data structure, typically a matrix of cells or pixels organized in rows and columns, where each cell contains a value. This simple structure, however, can lead to very large file sizes, especially for high-resolution imagery. To mitigate this, various data compression techniques are employed. Run-length coding (RLE) is a simple method that reduces file size by storing sequences of identical cell values as a single value and a count. For example, a row with ten consecutive cells of value '7' would be stored as '7, 10' instead of ten separate '7's. Chain code is another technique that represents the boundary of a region by storing a sequence of directional vectors. Block code is a method that decomposes a raster image into a set of, usually rectangular, blocks. A more sophisticated method is the quadtree, which recursively subdivides a raster image into four quadrants, stopping when a quadrant is homogeneous (all cells have the same value). This creates a variable-sized grid structure that is more efficient for representing homogeneous areas. Another advanced compression format mentioned is MrSID (Multiresolution Seamless Image Database), which allows for efficient viewing of massive raster images at multiple resolutions. Common raster file formats are designed to accommodate these structures and compression schemes.

Based on the above source, attempt the following five questions.

286. According to the passage, what is the primary purpose of using techniques like run-length coding and quadtree?
(A) To increase the spatial resolution of a raster image.
(B) To convert raster data into a vector format.
(C) To increase the number of values a cell can hold.
(D) To reduce the storage size of raster data files.

NODIA

287. The run-length coding (RLE) technique achieves compression by:
(A) recursively subdividing the image into four quadrants.
(B) representing the boundary of a region with directional vectors.
(C) storing sequences of identical cell values as a value and a count.
(D) decomposing the image into a set of rectangular blocks.

288. Which compression method described in the text involves recursively subdividing an image into quadrants until a quadrant's cells are all of the same value?
(A) Chain code.
(B) Quadtree.
(C) Block code.
(D) Run-length coding.

289. The passage describes the fundamental data structure of raster data as:
(A) a set of points, lines, and polygons.
(B) a sequence of directional vectors.
(C) a seamless database of multiple resolutions.
(D) a matrix of cells organized in rows and columns.

290. Based on the description, MrSID is identified as a format that is particularly efficient for:

(A) viewing very large images at different resolutions.
(B) representing the boundaries of raster regions.
(C) compressing data with short, repeating sequences.
(D) converting raster data to chain code.

Direction : Please read the following source carefully.

The representation of vector data is based on a data structure of coordinates for points, lines, and polygons. A key aspect of sophisticated vector data structures is topology, which refers to the rules governing the spatial relationships between adjacent or connected features. Topology explicitly stores information about connectivity (which lines connect), adjacency (which polygons are next to each other), and containment, which is independent of the coordinates. This makes certain spatial queries and analyses, such as network tracing or identifying adjacent parcels, highly efficient. The non-spatial attribute data associated with vector features is often managed within a Database Management System (DBMS). The advantage of using a DBMS in the context of GIS is its robust capability for data storage, retrieval, querying, and management, ensuring data integrity and reducing redundancy. Before vector data can be used effectively, it must undergo several processes. Data input involves capturing or converting data into a digital vector format. Crucially, all data must be registered to a common coordinate system through the application of projections. Furthermore, geometric transformation may be required to align datasets that were created at different scales or orientations, ensuring spatial consistency across all data layers in the GIS.

Based on the above source, attempt the following five questions.

291. What is the concept of "topology" in a vector data structure, as explained in the passage?
(A) The coordinate values of points and lines.
(B) The process of geometric transformation.
(C) The rules governing spatial relationships like adjacency and connectivity.
(D) The management of data within a DBMS.

292. The passage highlights which of the following as a primary advantage of using a Database Management System (DBMS) in GIS?
(A) To efficiently manage attribute data and ensure its integrity.
(B) To define the topology of vector features.
(C) To capture the initial coordinate data for points.
(D) To perform geometric transformations on raster data.

293. According to the text, why is the application of projections a crucial step in preparing vector data?
(A) To reduce the file size of the vector data.
(B) To create topological relationships between features.
(C) To convert vector data into a raster format.
(D) To register all data layers to a common coordinate system.

294. If a GIS analysis required finding all parcels of land that share a border with a specific park, which aspect of the vector data model would be most useful?
(A) The geometric transformation process.
(B) The explicitly stored topological information on adjacency.
(C) The non-spatial data stored in the DBMS.
(D) The data input and conversion method.

295. The process of aligning datasets created at different scales or orientations to ensure spatial consistency is referred to as:
(A) data input.
(B) topological creation.
(C) geometric transformation.
(D) database management.

Direction : Please read the following source carefully.

The integration of Remote Sensing (RS) and Geographic Information Systems (GIS) has become instrumental in Disaster Risk Reduction (DRR). Both global and national initiatives for Disaster Risk Management leverage these technologies for a comprehensive approach to handling natural and man-made hazards. A key application is in hazard evaluation and zonation, where RS data is used to identify areas prone to events like landslides, floods, or earthquakes,

Click Here to Buy book on Amazon

and GIS is used to map these zones. This process is followed by risk and vulnerability assessment, which involves overlaying hazard zonation maps with spatial data on population, infrastructure, and socio-economic factors to identify communities and assets at the greatest risk. In the aftermath of a disaster, RS is invaluable for rapid damage assessment, providing a synoptic view of the affected area to quantify the extent of destruction to buildings, infrastructure, and agriculture. The information derived from these assessments is then fed into a GIS for analysis and visualization, aiding emergency response and recovery planning. Proactively, RS and GIS are used for long-term mitigation through their role in land use planning and regulation. By identifying high-risk areas, these technologies inform policies for sustainable development, guiding where to build and where to restrict development to minimize future losses.

Based on the above source, attempt the following five questions.

296. According to the passage, how is "risk and vulnerability assessment" conducted using GIS?
(A) By solely mapping the physical extent of a hazard.
(B) By conducting post-disaster damage assessment only.
(C) By formulating national initiatives for disaster management.
(D) By overlaying hazard maps with data on population and infrastructure.

297. In the context of Disaster Risk Reduction, what is the primary role of Remote Sensing in the immediate aftermath of a disaster?
(A) To conduct rapid damage assessment.
(B) To perform hazard evaluation and zonation.
(C) To regulate land use planning for future development.
(D) To assess long-term socio-economic vulnerability.

298. The process of identifying and mapping areas prone to specific events like floods or landslides is referred to as:
(A) damage assessment.
(B) hazard evaluation and zonation.
(C) risk and vulnerability assessment.
(D) land use regulation.

299. The passage suggests that a proactive use of RS and GIS for disaster mitigation involves:
(A) quantifying the extent of destruction after an event.
(B) informing land use planning and regulation for sustainable development.
(C) providing a synoptic view for emergency response teams.
(D) managing global and national disaster management initiatives.

300. Based on the text, what is the integrated function of RS and GIS in DRR?
(A) RS provides data for hazard, vulnerability, and damage, while GIS is used for analysis, mapping, and planning.
(B) RS generates hazard data and GIS formulates national policy directly.
(C) RS assesses damage, while GIS is only used for pre-disaster zonation.
(D) RS is used for land use planning, while GIS is used for rapid damage assessment.

www.nodia.in

Downloaded from www.pdf.tube

ANSWERS

1. (B) Obtaining information about an object or area using data from a device not in physical contact.
Remote sensing is a science and technology used to acquire information about Earth's surface or atmospheric features without physical contact. Sensors mounted on aircraft or satellites detect reflected or emitted electromagnetic radiation to gather data. This method allows for large-scale observation and monitoring of inaccessible regions. It is distinct from traditional surveying, which requires direct physical presence and contact with the objects being measured or mapped.

2. (C) Statement I is true, but Statement II is false.
Remote sensing systems rely on measuring electromagnetic energy reflected or emitted from objects. While all systems measure this energy, the interaction is never uniform across materials. Different substances possess unique physical and chemical properties that cause them to reflect, absorb, or transmit radiation in distinct ways. This non-uniformity allows for the identification of various features on the Earth's surface, as each material produces a specific spectral response.

3. (C) They are inversely proportional, with their product being a constant.
The relationship between wavelength and frequency of electromagnetic radiation is governed by the speed of light. As the speed of light in a vacuum remains constant, the product of frequency and wavelength is always equal to this speed. Consequently, waves with shorter wavelengths possess higher frequencies, while waves with longer wavelengths have lower frequencies. This inverse relationship is fundamental to understanding the entire electromagnetic spectrum used in sensing.

4. (D) It requires a medium for propagation.
Electromagnetic radiation consists of oscillating electric and magnetic fields that propagate through space. Unlike mechanical waves, such as sound, electromagnetic waves do not require any physical medium for transmission. They can travel efficiently through the vacuum of space at the speed of light. This characteristic is what enables remote sensing satellites to detect energy reflected or emitted from Earth's surface despite the vast distance between them.

5. (C) Rayleigh scattering
Rayleigh scattering occurs when electromagnetic radiation interacts with atmospheric particles or gas molecules that are much smaller than the wavelength of the radiation. This type of scattering is highly wavelength-dependent, affecting shorter wavelengths like blue and violet much more significantly than longer ones. Consequently, blue light is scattered in all directions throughout the atmosphere. This specific physical process is responsible for the blue appearance of the sky.

6. (B) They represent regions of the spectrum absorbed by atmospheric gases.
Atmospheric windows are specific ranges of the electromagnetic spectrum where the atmosphere is relatively transparent to incoming and outgoing radiation. In these bands, radiation travels with minimal attenuation from gases like water vapor, carbon dioxide, and ozone. Sensors are specifically designed to operate within these windows to effectively observe Earth's surface. Conversely, regions where gases absorb energy are called absorption bands and are not considered windows for observation.

7. (A) P-4, Q-2, R-1, S-3
Electromagnetic radiation undergoes several processes when interacting with materials and the atmosphere. Absorption involves energy conversion into heat or other forms within a medium. Reflectance is the redirection of radiation from a surface. Scattering is the unpredictable redirection of energy by atmospheric particles. Transmission occurs when radiation passes through a substance without being absorbed or reflected. Understanding these four distinct interactions is essential for interpreting different types of satellite data.

NODIA

8. (A) The forest, due to high chlorophyll content in healthy vegetation.
Healthy green vegetation exhibits a unique spectral reflectance pattern characterized by very high reflectance in the near-infrared region. This phenomenon is primarily caused by the internal cellular structure of leaves, particularly the spongy mesophyll. In contrast, urban materials like concrete and asphalt generally have much lower reflectance in these same wavelengths. Therefore, in a satellite image, forests appear significantly brighter than dense urban areas when viewed in near-infrared bands.

9. (C) The pattern of reflectance of a material as a function of wavelength.
A spectral signature represents the unique way a material reflects, absorbs, and transmits electromagnetic energy across different wavelengths. Every object on Earth's surface has a characteristic reflectance curve that varies depending on its physical and chemical composition. By analyzing these distinctive patterns, researchers can distinguish between different land cover types, such as water, soil, and vegetation. This concept is fundamental to the classification and interpretation of satellite imagery.

10. (A) Refraction
When electromagnetic radiation reaches the Earth's surface, it typically undergoes three primary processes: reflection, absorption, or transmission. Reflection occurs when energy bounces off the surface, absorption involves energy being taken in by the material, and transmission happens when energy passes through the object. While refraction involves the bending of light as it passes between different media, it is not considered one of the three fundamental surface interactions.

11. (C) Statement I is false, but Statement II is true.
Spatial resolution is defined by the size of the smallest object detectable on the ground, represented by the pixel size in an image. It does not relate to distinguishing between different wavelengths of energy. Conversely, temporal resolution describes the frequency with which a satellite sensor revisits and images the same geographic location on Earth. Understanding the distinction between these various types of resolution is critical for selecting the appropriate satellite data.

12. (B) The ability of the sensor to discriminate slight differences in energy.
Radiometric resolution determines the sensitivity of a remote sensing sensor to small variations in the magnitude of electromagnetic energy. It is typically expressed in terms of bits, which represent the number of digital levels used to record data. Higher radiometric resolution allows a sensor to distinguish between subtle differences in brightness or intensity, which is particularly useful for detecting variations in water quality, soil moisture, or vegetation health.

13. (C) Geostationary Orbit - Appears stationary from Earth for communication.
Geostationary satellites are placed in a high-altitude orbit directly above the Earth's equator. They orbit at the same speed as the Earth's rotation, making them appear fixed over a single geographic point. This characteristic makes them ideal for telecommunications and continuous meteorological monitoring of specific regions. In contrast, sun-synchronous satellites maintain a near-polar orbit and pass over locations at the same local solar time each day to ensure consistent illumination.

14. (A) Both A and R are true and R is the correct explanation of A.
Clear water bodies typically exhibit low reflectance in the visible spectrum and extremely low reflectance in the near-infrared region. This occurs because water molecules are highly efficient at absorbing infrared energy, converting it into heat. Consequently, water appears very dark or black in near-infrared imagery. This strong absorption property explains why the spectral response of water decreases significantly as the wavelength increases from the visible bands into the near-infrared range.

15. (A) A satellite is the platform, while the sensor is the instrument.
In remote sensing terminology, the satellite serves as the platform or vehicle that carries scientific equipment into space. The sensor is the actual instrument or device mounted on that platform designed to detect and record electromagnetic radiation. While the platform provides the

Click Here to Buy book on Amazon

necessary stability, power, and positioning, the sensor is responsible for capturing the data used for analysis. Distinguishing between the carrying vehicle and the measuring tool is essential.

16. (B) Physical collection of surface samples by the satellite instruments.
Satellite image interpretation involves extracting meaningful information from digital data through visual analysis or computer algorithms. Visual interpretation relies on elements like tone, texture, and pattern, while digital processing uses automated classification methods. Ground-truthing is also used to verify remote observations with field data. However, satellites do not physically collect surface samples; they only measure electromagnetic energy from a distance, which is the core principle of remote sensing technology.

17. (B) 3 and 4 only
Active remote sensing systems provide their own source of electromagnetic energy to illuminate the Earth's surface and measure the reflected signal. Radar is a primary example, as it emits microwave pulses and records the backscattered energy. Similarly, a camera using a flash functions as an active system by providing its own light. Passive systems, however, rely on naturally available energy sources, such as sunlight or thermal radiation emitted by objects themselves.

18. (A) To extract information from raw data through enhancement and classification.
Digital image processing is a critical step in remote sensing that involves using computer algorithms to manipulate and analyze satellite data. The primary objective is to improve the visual quality of images through enhancement techniques and to categorize features into thematic classes using automated classification. This process transforms raw digital numbers into actionable information, such as land cover maps, which can then be used for various scientific, environmental, or planning applications.

19. (C) Incident Energy = Reflected Energy + Absorbed Energy + Transmitted Energy
The energy balance equation describes the physical principle of conservation of energy when electromagnetic radiation interacts with a surface. It states that the total incident energy must equal the sum of the energy reflected by the surface, the energy absorbed by the material, and the energy transmitted through the object. This relationship is fundamental to remote sensing, as it dictates how much energy is available to be detected by sensors after interaction.

20. (D) 3, 1, 4, 2
The electromagnetic spectrum is organized based on wavelength and frequency. Arranged by increasing wavelength, X-rays have the shortest wavelengths and highest energy. These are followed by visible light, which occupies a very narrow band detectable by the human eye. Infrared radiation has longer wavelengths than visible light, and microwaves represent an even longer wavelength region. Understanding this sequence is vital for selecting appropriate sensors to observe different physical phenomena on Earth.

21. (C) A framework for managing and analyzing data rooted in geography.
A Geographic Information System is fundamentally a framework designed to capture, store, manage, analyze, and present data that is spatially referenced to the Earth. The core philosophy of GIS involves integrating various types of information through their common geographic location. This allows users to visualize patterns, relationships, and trends that are not apparent in traditional databases, facilitating informed decision-making across diverse fields such as urban planning, environmental science, and disaster management.

NODIA

22. (A) Both Statement I and Statement II are true.
Geographic information consists of two primary types of data that work together. Spatial data identifies the precise geographic location and geometric shape of features, such as points, lines, or polygons. Non-spatial data, commonly referred to as attribute data, provides descriptive characteristics about those features, such as names, populations, or land use types. A functional GIS links these two data types, allowing users to query and analyze features based on their specific properties.

23. (D) Satellite Sensor
A Geographic Information System is composed of five essential components: hardware, software,

data, people, and methods. Hardware includes the computers and peripherals used, while software provides the tools for analysis. Data is the core information being processed, and people are required to manage the system. Methods refer to the specialized procedures and business rules applied. While a satellite sensor is a source of spatial data, it is not a core component.

24. (B) P-3, Q-4, R-1, S-2
Each component of a Geographic Information System serves a specific role. Hardware consists of physical devices like high-speed processors for data handling. Software includes specialized applications like ArcGIS or QGIS that provide analysis tools. Data involves information organized into vector layers and attribute tables for processing. People represent the skilled professionals, such as GIS analysts, who operate the system and interpret results. These components must integrate effectively to create a functional and useful system.

25. (C) A grid cell or pixel
The raster data model represents geographic space as a continuous surface divided into a regular grid of cells, often called pixels. Each cell in the grid holds a specific value representing information about that location, such as elevation, temperature, or spectral reflectance. This structure is particularly efficient for representing continuous phenomena that change gradually across space. The size of these cells determines the spatial resolution and the level of detail captured in the dataset.

26. (A) It provides a more precise representation of discrete boundaries.
The vector data model uses coordinate-based points, lines, and polygons to represent geographic features. This approach is highly efficient for depicting discrete objects with well-defined boundaries, such as property lines, administrative borders, or transportation networks. Unlike the raster model, which generalizes features into grid cells, vector data maintains high geometric precision. This makes it the preferred choice for mapping and analysis tasks where accurate location and shape of specific entities are required.

27. (A) Both A and R are true and R is the correct explanation of A.
Topology is a critical feature of the vector data model that defines the spatial relationships between different geographic features, such as adjacency, connectivity, and containment. Unlike simple geometric data, topological structures explicitly store how features are related to one another regardless of their coordinates. This capability is a significant advantage as it ensures data integrity, facilitates advanced spatial analysis like network tracing, and allows for more complex queries within a Geographic Information System framework.

28. (B) Large data volumes and potential loss of specific detail.
A major disadvantage of the raster data model is its tendency to produce very large file sizes, especially when high spatial resolution is required. Because every cell in the grid must store a value, even for empty areas, data storage can become problematic. Additionally, the grid structure can lead to the loss of fine geometric detail and the generalization of boundaries, making it less suitable for applications requiring high precision for discrete linear or area features.

29. (C) Descriptive attributes such as name, type, or population.
Non-spatial data in a Geographic Information System refers to the descriptive information associated with geographic features. Often called attribute data, these characteristics describe "what" a feature is, rather than "where" it is located. Examples include the name of a city, the population of a district, or the material used for a road. This data is typically stored in tables and linked to spatial features through unique identifiers, enabling complex thematic mapping and analysis.

30. (A) 1, 2, and 4 only
The raster model uses a grid of cells for representation, while the vector model employs points, lines, and polygons for discrete features. A key advantage of the vector model is its ability to explicitly store topological relationships between features. However, the vector model is typically more efficient for discrete objects, while raster is better for continuous data. Furthermore, vector data structures are generally more complex than

Downloaded from www.pdf.tube

received electromagnetic energy. It is typically measured in bits, which determine the number of distinct digital levels used to record the data. An 8-bit sensor can distinguish two to the power of eight, or 256, unique levels of intensity. This allows the sensor to capture a wide range of brightness values, enabling the detection of subtle differences in the spectral response of various surface materials.

75. (D) The development of the Canada GIS (CGIS) in the 1960s.
The development of the Canada Geographic Information System in the mid-1960s is widely considered a major milestone in the history of spatial technology. Led by Roger Tomlinson, who is often called the "father of GIS," this project was the first large-scale system designed to store and analyze land resource data using computers. It introduced many fundamental concepts of digital mapping and spatial analysis that form the basis of modern GIS software used by professionals and researchers around the world today.

76. (B) 2, 1, 4, 3
GIS data representation follows a logical hierarchy starting with the simplest geometric units. A coordinate pair (X,Y) defines a precise location in space. These coordinates are combined to form basic geometric primitives: points, lines, and polygons. These primitives are then used to represent real-world entities, known as features. Finally, these features are organized into a vector data model, which provides a structured framework for storing and analyzing geographic information. This progression shows how complex digital maps are built from simple mathematical foundations.

77. (C) The attribute of the geographic area covered by the cell.
In a raster data model, the geographic area is divided into a regular grid of cells. Each individual cell contains a value that represents a specific attribute of the portion of the Earth's surface it covers. This value could indicate a variety of information, such as elevation, land cover type, temperature, or the intensity of reflected sunlight. The entire grid creates a continuous representation of the variable being mapped, where each cell's value is characteristic of its specific location.

NODIA

78. (D) To represent 3D Earth on a 2D map surface.
Map projections are mathematical transformations used to represent the three-dimensional, curved surface of the Earth on a two-dimensional flat plane, such as a computer screen or paper map. Because it is impossible to flatten a sphere without distortion, different projections are designed to preserve specific properties like area, shape, distance, or direction. Choosing the correct projection is a fundamental step in a Geographic Information System project, as it ensures that spatial data is displayed and analyzed accurately for its intended purpose.

79. (A) Overlay Analysis
Overlay analysis is a fundamental Geographic Information System operation that involves combining two or more different spatial datasets to create a new layer. By performing an overlay of a land use layer and a soil type layer, the system identifies where specific land uses coincide with certain soil types. This process results in a new dataset that contains the integrated attributes of both original layers. It is widely used for site suitability analysis, environmental modeling, and diverse urban planning applications.

80. (B) Differential EMR interaction with materials results in unique spectral signatures.
The relationship between electromagnetic radiation and spectral signatures is one of cause and effect. Every material on Earth possesses unique physical and chemical properties that cause it to interact with radiation differently by reflecting, absorbing, or transmitting specific wavelengths. This differential interaction results in a unique pattern of reflectance across the spectrum, known as a spectral signature. By measuring these distinctive patterns, remote sensing sensors can identify and distinguish between various objects and land cover types from a distance.

81. (B) Compressing raster data by recursive subdivision.
A quadtree is a specialized data structure used in a Geographic Information System primarily for compressing and managing raster data. It works by recursively subdividing a grid into four quadrants. If all cells within a quadrant have the same value, they are stored as a single unit; otherwise, the quadrant is subdivided again.

like rotation, scaling, and translation to correct distortions in raw imagery or scanned maps. By performing this transformation, different layers of spatial data can be correctly overlaid and analyzed together. This step is essential for ensuring that digital data accurately represents real-world geographic locations and maintains spatial integrity across various datasets.

39. (D) Shapefile
A Shapefile is a widely used vector data format developed for storing the geometric location and attribute information of geographic features. It represents data as points, lines, or polygons and is supported by almost all Geographic Information System software. In contrast, GeoTIFF, JPEG2000, and MrSID are primarily raster formats used for storing satellite imagery, aerial photographs, or scanned maps. Understanding these different file formats is crucial for ensuring compatibility and efficient data management within various spatial projects.

40. (A) Automatic correction of topological errors
Using a Database Management System offers several advantages for Geographic Information Systems, including reduced data redundancy through structured storage and improved security via access controls. It also facilitates multi-user environments where many people can edit data simultaneously. However, a standard DBMS does not automatically correct topological errors, such as gaps or overlaps between polygons. These spatial integrity issues must typically be addressed using specialized topological tools and rules within the GIS software itself rather than the database.

41. (C) Chain code
Chain coding is a raster data compression technique specifically designed to represent the boundaries of regions. It works by defining a starting cell and then using a sequence of unit vectors or direction codes to trace the perimeter of the feature. This method is highly efficient for storing the shapes of discrete objects within a grid. By only recording the boundary information rather than every internal cell, it significantly reduces the amount of data needed to represent geographic shapes.

42. (A) Provide a framework for using geospatial technology in DRM.
Global and national initiatives for disaster risk management are designed to establish organized frameworks that integrate remote sensing and Geographic Information Systems into disaster response strategies. These initiatives promote the systematic use of geospatial data for hazard mapping, risk assessment, and emergency planning. By providing guidelines and fostering cooperation between agencies, they aim to enhance the efficiency of disaster mitigation and response efforts. The focus is on leveraging technology to reduce the impact of natural and man-made disasters.

43. (B) P-3, Q-4, R-1, S-2
Disaster management involves four distinct phases where geospatial technology is applied. Mitigation uses hazard zonation mapping to identify high-risk areas before events occur. Preparedness involves developing evacuation routes and resource inventories to ensure readiness. Response focuses on rapid damage assessment and mapping immediately after a disaster to guide emergency efforts. Recovery utilizes monitoring and land use planning to manage reconstruction and long-term rebuilding. Integrating remote sensing and GIS across these phases significantly improves overall disaster resilience and coordination.

44. (B) Mapping areas based on the probability of a hazard occurring.
Hazard zonation is the process of delineating geographic areas into different zones based on the likelihood or intensity of a specific natural hazard. Using historical data and spatial analysis, researchers identify which regions are most susceptible to events like floods, landslides, or earthquakes. These maps are vital for land use planning and emergency preparedness, as they help authorities understand where threats are greatest. This allows for targeted mitigation strategies and more effective allocation of resources to protect communities.

45. (A) Both A and R are true and R is the correct explanation of A.
Remote sensing is an invaluable tool for rapid damage assessment because it provides a comprehensive, synoptic view of large areas that

Click Here to Buy book on Amazon

the simple grid structure found in the raster model.

31. (A) Raster data model, where each cell holds a temperature value.
The raster data model is ideal for representing continuous surfaces where values change gradually across geographic space. In the case of temperature variation, a grid of cells can be used where each cell contains a specific temperature reading. This allows for a smooth representation of the variable across the entire study area. In contrast, the vector model is better suited for discrete features with clear boundaries and would be less efficient for modeling continuous phenomena.

32. (B) The spatial relationships between connecting features.
Topology in a vector-based Geographic Information System focuses on the geometric properties and spatial relationships among features that remain unchanged by transformations like stretching or bending. It explicitly defines how points, lines, and polygons are connected or situated relative to each other, such as which parcels are adjacent or which pipes are connected in a network. This information is fundamental for maintaining data accuracy and performing complex spatial operations like pathfinding and area calculations.

33. (B) Run-length code
Run-length encoding is a common raster data compression technique used to reduce file size by identifying sequences of adjacent cells with identical values. Instead of storing each cell individually, the method records the value and the number of consecutive occurrences within a row. This approach is highly effective for datasets with large, homogeneous areas where cell values do not change frequently. It significantly improves storage efficiency while maintaining the original data without any loss of information.

34. (A) MrSID - A lossless compression technique.
MrSID is a sophisticated file format used for compressing large raster images, but it is primarily known for its lossy compression capabilities. While it allows for massive reductions in file size, some data detail may be lost during the process. In contrast, techniques like run-length encoding are used to compress identical cell values in rows. Chain codes represent region boundaries using vectors, and quadtrees use recursive subdivision of the grid into quadrants for efficient spatial data management.

35. (C) Digitizing
Digitizing is the fundamental process of converting geographic data from analog sources, such as paper maps or scanned images, into a digital vector format. This typically involves a user tracing the boundaries and locations of features using a mouse or a specialized digitizing tablet. Through this process, physical points, lines, and polygons are transformed into coordinate-based data that can be stored, edited, and analyzed within a Geographic Information System, creating a digital representation of reality.

36. (D) To manage and retrieve non-spatial attribute data.
In a Geographic Information System, a Database Management System serves as the engine for organizing and handling non-spatial attribute data. It provides a structured environment for storing descriptive information about geographic features in relational tables. The DBMS allows users to efficiently query, update, and retrieve this attribute data using standardized languages like SQL. By linking these tables to spatial features, the system enables complex analysis based on both the location and the characteristics of objects.

NODIA

37. (C) Statement I is true, but Statement II is false.
Data input is widely recognized as the most expensive and time-consuming phase of any Geographic Information System project due to the intensive labor required for digitizing and quality control. However, scanning a map does not create vector data directly. Instead, scanning produces a raster image consisting of pixels. To obtain vector features from a scan, additional processing steps such as vectorization or manual tracing are necessary to define the discrete points, lines, and polygons.

38. (B) Geometric transformation
Geometric transformation is the process used in a Geographic Information System to align a dataset to a specific, known coordinate system. This often involves mathematical operations

distinguished on the ground, which corresponds to the area represented by a single pixel in an image. Sensors with high spatial resolution can detect very small objects, while those with low resolution provide a more generalized view of large areas. This determines the image's clarity.

53. (A) Both Statement I and Statement II are true.
Atmospheric scattering occurs through different physical processes depending on the size of the particles involved. Mie scattering happens when the diameter of particles like dust or smoke is approximately equal to the wavelength of the radiation. Non-selective scattering occurs with even larger particles, such as water droplets in clouds, which scatter all visible wavelengths equally. This equal scattering is why clouds and fog appear white. Both processes significantly influence how electromagnetic radiation interacts with the atmosphere before reaching a sensor.

54. (B) Spectral signature
A spectral signature is the characteristic pattern of electromagnetic radiation reflected or absorbed by a specific material across different wavelengths. Every substance, whether it is vegetation, water, or soil, interacts with energy in a unique way based on its chemical and physical properties. These distinctive curves allow scientists to identify and differentiate various Earth surface materials using satellite data. The spectral signature acts as a unique "fingerprint" that is essential for accurate land cover classification and environmental monitoring.

55. (D) A RADAR (Radio Detection and Ranging) system.
An active remote sensing system provides its own source of electromagnetic energy to illuminate the target and then measures the energy reflected back. A RADAR system is a classic example, as it emits microwave pulses and records the returned signals. This allows it to operate independently of sunlight, even at night or through cloud cover. In contrast, passive sensors like standard cameras or thermal scanners rely on naturally available energy sources such as solar reflectance or emitted heat from objects.

56. (A) Spectral resolution
Spectral resolution refers to the ability of a remote sensing instrument to define fine wavelength intervals. It is characterized by the number and width of the specific bands within the electromagnetic spectrum that the sensor can record. A sensor with high spectral resolution has many narrow bands, allowing it to distinguish between materials that have very similar reflectance patterns. This capability is essential for detailed applications like identifying specific mineral types or monitoring the physiological health of different vegetation species.

NODIA

57. (C) Geostationary orbit
A geostationary orbit is a high-altitude circular orbit located directly above the Earth's equator. Satellites in this orbit travel at the same rotational speed as the Earth, making them appear stationary relative to a fixed point on the surface. This unique positioning allows for continuous, real-time monitoring of the same geographic area, which is vital for weather forecasting and communication. Because they stay fixed, they can observe atmospheric changes as they happen over a large portion of the globe.

58. (A) It has a simple data structure and is ideal for continuous data.
The primary advantage of the raster data model in a Geographic Information System is its simple and consistent grid structure. This makes it exceptionally well-suited for representing continuous geographic phenomena, such as elevation, temperature, or rainfall, where values vary across space without sharp boundaries. The regular arrangement of cells also simplifies many types of spatial analysis, particularly mathematical operations and map overlays, allowing for efficient processing of complex environmental data across large study areas.

59. (D) Vector data model
The vector data model is a fundamental method used in Geographic Information Systems to represent discrete geographic features. It uses three basic geometric primitives: points for specific locations, lines for linear features like roads, and polygons for enclosed areas like lakes or administrative boundaries. Each feature is defined by precise coordinates, allowing for high geometric accuracy. This model is particularly effective for mapping and analyzing objects with

well-defined borders and is widely used for urban and transportation planning applications.

60. (B) 1, 2, and 3 only
A functional Geographic Information System requires both spatial data, which specifies "where" a feature is located, and non-spatial attribute data, which describes its characteristics. Spatial data defines the location and shape, such as the boundaries of a country. Non-spatial data provides descriptive information, like the name or population of that country. While shapes are spatial, attributes like population are non-spatial. Integrating these two data types allows for powerful analysis and visualization of geographically referenced information.

61. (C) Georeferencing
Georeferencing is the critical process of assigning real-world geographic coordinates to a digital image or dataset. By linking specific points in the data to known locations on the Earth's surface, this process ensures that the information is correctly positioned in space. Georeferencing allows different layers of data, such as satellite imagery and property boundaries, to be overlaid accurately. This step is fundamental for any spatial analysis, as it establishes the necessary geographic framework for all subsequent processing.

62. (A) Both A and R are true and R is the correct explanation of A.
In many simple vector data formats, like shapefiles, topological relationships such as adjacency and connectivity are not inherently stored within the file structure. For these relationships to be used in advanced spatial analysis, topology must be explicitly built or computed. This involves using more advanced data structures, such as those found in geodatabases, which store how features relate to one another. Building topology is essential for ensuring data integrity and performing complex operations like network routing or area-based queries.

63. (D) Lempel-Ziv-Welch (LZW)
Various specialized techniques are used to compress raster data in a Geographic Information System. Run-length encoding identifies sequences of identical values, while quadtrees use recursive quadrant subdivision to handle spatial redundancy. Chain codes are used to trace and store the boundaries of regions. While Lempel-Ziv-Welch is a common general-purpose compression algorithm used for many file types, it is not specifically categorized as one of the primary raster-specific data compression models typically discussed in fundamental GIS textbooks.

64. (A) P-2, Q-4, R-1, S-3
Geographic Information System concepts involve various processes and sciences. Topology is the study of spatial relationships between features, such as connectivity. Projection is the mathematical method used to transform the three-dimensional Earth into a two-dimensional map. Rasterization is the process of converting vector data into a grid-based raster format. Digitizing is the manual or automated technique of converting analog maps into digital vector data. Each of these terms represents a fundamental step or concept in managing spatial information.

65. (B) Buffering
Buffering is a fundamental spatial analysis technique in a Geographic Information System that creates an area of a specified distance around a chosen geographic feature. In this scenario, a 500-meter buffer would be generated along the proposed highway route. The system then identifies all residential property features that fall within this defined zone. This type of analysis is widely used in urban planning and environmental impact assessments to understand how specific projects or hazards might affect the surrounding area and its inhabitants.

66. (A) Calculating total number of people living within a high-hazard zone.
While remote sensing is excellent for observing physical changes like floods or landslides, it cannot provide detailed socio-economic information on its own. Calculating the number of people in a hazard zone requires integrating spatial data from satellite images with non-spatial census data. This integration is the primary strength of a Geographic Information System. Without a GIS to link and analyze these different data layers, performing complex calculations that involve both geographic locations and human population characteristics is extremely difficult.

Downloaded from www.pdf.tube

67. (C) Risk is independent of the hazard's probability of occurrence.
Risk and vulnerability assessment is a complex process that identifies the potential impact of natural hazards on communities. Vulnerability incorporates various social, economic, and physical factors that influence susceptibility to harm. A Geographic Information System is a powerful tool for overlaying these vulnerability factors with hazard data to create detailed risk maps. However, risk is fundamentally dependent on the probability of a hazard occurring; a high-intensity event with a very low probability results in a different risk level.

68. (D) Guide development away from high-hazard areas to reduce vulnerability.
Sustainable land use planning in disaster-prone regions focuses on managing development to minimize future losses. By using hazard maps to identify dangerous zones, planners can implement regulations that guide the construction of new infrastructure and settlements toward safer locations. This proactive approach aims to reduce the overall vulnerability of the population and economy to natural disasters. Instead of prohibiting all development, the goal is to ensure that growth is balanced with safety, long-term sustainability, and effective risk management strategies.

69. (A) 1 and 2 only
Remote sensing and Geographic Information Systems provide essential support for disaster risk reduction. Satellite imagery allows for rapid damage assessment by comparing images taken before and after an event. A GIS is instrumental in logistical planning, such as identifying the most accessible and safe locations for relief shelters. However, hazard zonation maps are not static and must be updated as environmental conditions change. Furthermore, while these technologies are powerful for management and response, they cannot prevent natural disasters from occurring.

70. (B) Rayleigh Scattering
Rayleigh scattering occurs when electromagnetic radiation interacts with atmospheric gas molecules or particles that are significantly smaller than the wavelength of the radiation. This physical phenomenon is inversely proportional to the fourth power of the wavelength, meaning it affects shorter wavelengths, such as blue light, much more intensely than longer ones. This selective scattering in the upper atmosphere is the reason why the sky appears blue to the human eye during clear daylight hours when sunlight passes through the air.

71. (D) Certain bands within the Infrared region
The Earth's atmosphere is not transparent to all wavelengths of electromagnetic radiation. Specific gases, most notably water vapor and carbon dioxide, are strong absorbers of energy in several bands within the infrared region. This absorption prevents that radiation from passing freely through the atmosphere. These regions of high absorption are known as absorption bands, and they contrast with atmospheric windows, where the atmosphere allows radiation to pass through with minimal interference, enabling satellite-based observation of the Earth's surface.

72. (A) Both Statement I and Statement II are true.
Different types of resolution are critical for various applications in remote sensing. High temporal resolution, which means frequent revisits, is essential for monitoring rapidly changing events like floods or forest fires in real-time. Spatial resolution refers to the level of detail captured; an image with 1-meter resolution provides much finer detail than one with 30-meter resolution, as each pixel represents a smaller area on the ground. Both factors are vital for selecting the right data for specific tasks.

NODIA

73. (C) Reflected or emitted by the object.
The fundamental principle of remote sensing involves detecting and measuring electromagnetic radiation that has interacted with an object or area. Sensors on satellites or aircraft primarily record either the energy reflected by a surface, such as sunlight bouncing off vegetation, or the thermal energy emitted by the object itself. By analyzing the intensity and wavelength of this reflected or emitted radiation, scientists can identify the characteristics and properties of features on Earth's surface from a significant distance.

74. (A) 8-bit
Radiometric resolution defines the sensitivity of a sensor to variations in the magnitude of

may be inaccessible on the ground. Immediately following a disaster, satellite imagery can be used to quickly identify flooded zones, collapsed buildings, and blocked transportation routes. This aerial perspective allows emergency responders to prioritize their efforts and allocate resources more effectively. The speed and broad coverage offered by satellites make them essential for managing large-scale disasters in real-time.

46. (D) Evaluating characteristics of a community susceptible to hazards.
Vulnerability assessment in disaster risk reduction involves analyzing the social, economic, and physical characteristics that make a community or its assets susceptible to the damaging effects of a hazard. This process identifies who and what is at risk, considering factors like population density, infrastructure quality, and economic resources. By understanding these vulnerabilities, planners can develop targeted strategies to strengthen community resilience. It moves beyond just mapping the hazard itself to evaluating the potential human and material impact.

47. (A) By integrating hazard maps with land use to regulate development.
Geographic Information Systems facilitate sustainable land use planning by allowing planners to overlay detailed hazard maps with existing land use data. This integration enables authorities to identify areas with high disaster risk and implement regulations to restrict or guide development away from those zones. By ensuring that new infrastructure and settlements are built in safer locations, GIS helps reduce future vulnerability. This proactive approach is a cornerstone of building disaster-resilient communities and promoting long-term environmental and social sustainability.

48. (C) 1, 2, and 4 only
Remote sensing and Geographic Information Systems are versatile tools used across all phases of disaster risk reduction. They can model hurricane paths, detect landslides in remote areas, and create vulnerability maps by combining socio-economic data with hazard layers. These technologies are useful not only for post-disaster response but also for long-term mitigation and preparedness. By integrating diverse datasets, they provide a comprehensive understanding of risks, helping planners make informed decisions to protect lives and infrastructure before disasters occur.

49. (B) Hazard, Vulnerability, and Exposure
In disaster management, risk is conceptualized as the intersection of three key components: hazard, vulnerability, and exposure. A hazard is a potentially damaging physical event, while vulnerability refers to the characteristics of a community that make it susceptible to harm. Exposure identifies the people and assets located in the hazardous area. All three must be present for a risk to exist. Managing risk involves implementing strategies to reduce these components, such as building stronger infrastructure or relocating populations.

50. (A) The atmosphere is transparent to radiation.
An atmospheric window is a specific range of the electromagnetic spectrum where the Earth's atmosphere is relatively transparent, allowing radiation to pass through with very little absorption or scattering. These windows are critical for remote sensing because they provide the only opportunities for satellite sensors to clearly observe the surface from space. The visible light region is a well-known example. Sensors must be designed to operate within these specific bands to ensure they can capture high-quality data from the ground.

51. (C) 2, 4, 3, 1
The history of remote sensing began with the invention of photography in the early nineteenth century. This was followed by the use of balloons for aerial photography to capture views from above. The development of manned spaceflight introduced the capability to take photographs from orbit. Finally, the launch of LANDSAT-1 in 1972 marked the beginning of modern, systematic satellite-based Earth observation. This chronological progression shows how technology moved from ground-based imaging to sophisticated spaceborne sensors over nearly two centuries.

52. (D) Spatial resolution
Spatial resolution is a fundamental characteristic of a remote sensing system that defines the level of detail it can capture. It refers to the size of the smallest object or feature that can be

Click Here to Buy book on Amazon

This method is highly efficient for representing datasets with large areas of uniform values, as it significantly reduces storage requirements while maintaining the spatial organization of the information.

82. (A) Both A and R are true and R is the correct explanation of A.
Selecting an appropriate map projection is a critical decision in any Geographic Information System project. Because the Earth is a three-dimensional sphere, any attempt to represent it on a two-dimensional map inherently introduces distortions. Different projections are designed to minimize distortion in specific properties, such as area, shape, or distance, depending on the map's requirements. The choice of projection directly impacts the accuracy of spatial measurements and the overall visual representation, making it essential for the project's success.

83. (C) Response Time
In the framework of disaster risk reduction, risk is traditionally defined as a function of three core components: hazard, vulnerability, and exposure. A hazard is the threatening physical event, vulnerability describes the susceptibility of the community to that event, and exposure identifies the people and assets located in the danger zone. While response time is a critical factor in emergency management and saving lives, it is an operational characteristic of the response phase rather than a fundamental component of the risk itself.

84. (D) Comparing pre- and post-disaster satellite images to detect changes.
A common and highly effective technique for damage assessment using remote sensing involves change detection. This process requires comparing satellite imagery acquired before a disaster with imagery taken immediately after the event. By identifying differences in the landscape, such as collapsed buildings, flooded areas, or landslides, analysts can rapidly quantify the extent and location of the damage. This synoptic view is essential for guiding emergency response efforts and planning for reconstruction in large or inaccessible affected areas.

85. (C) It allows for efficient querying of large attribute datasets.
A Database Management System plays a vital role in a Geographic Information System by providing a structured framework for managing non-spatial attribute data. One of its primary advantages is the ability to perform complex and efficient queries on large datasets. Users can search for specific features based on their characteristics, such as finding all buildings constructed before a certain year. This capability, linked with spatial analysis, allows for a more comprehensive understanding of geographic features and their associated information.

NODIA

86. (B) P-3, Q-4, R-1, S-2
Remote sensing systems are defined by four primary types of resolution. Spatial resolution refers to the pixel size, representing the smallest ground element detectable. Spectral resolution is determined by the number and width of the wavelength bands the sensor records. Temporal resolution describes the revisit frequency, or how often the satellite images the same location. Radiometric resolution indicates the sensitivity of the sensor, often measured by the number of bits used to record the intensity of electromagnetic energy.

87. (D) A GIS integrates data to delineate high landslide susceptibility.
Hazard evaluation and zonation involve using a Geographic Information System to identify and map areas that are prone to specific natural threats. For example, by integrating various data layers like slope steepness, geological composition, land cover, and historical rainfall patterns, the system can delineate zones with high landslide susceptibility. This spatial analysis helps planners understand where future hazards are most likely to occur, allowing for targeted mitigation efforts and more informed land use regulations to protect communities.

88. (A) Raster represents the world as a grid; Vector uses discrete features.
The fundamental difference between the two primary GIS data models lies in their representation of space. The raster model divides the geographic area into a continuous grid of cells, where each cell holds a value. This is ideal for continuous phenomena like elevation. In contrast, the vector model represents the world using discrete geometric features—points, lines,

evolution was driven by the need for more efficient and comprehensive regional and environmental planning.

103. (B) Feature attributes
In a Geographic Information System, the question "What is at this location?" is a fundamental query designed to retrieve the descriptive information associated with a specific geographic point or area. This information is stored as feature attributes in an attribute table linked to the spatial data. By selecting a location on a map, the user can access non-spatial data such as the name of a building, the type of soil, or the population of a specific district.

104. (A) Both A and R are true and R is the correct explanation of A.
Healthy vegetation exhibits a very high reflectance in the near-infrared region of the electromagnetic spectrum. This characteristic is primarily due to the internal cellular structure of the leaves, specifically the spongy mesophyll layer, which strongly scatters and reflects infrared energy. As a result, vegetation appears exceptionally bright in satellite imagery captured in the near-infrared bands. This unique spectral response is a key indicator of plant health and is widely used for agricultural monitoring and environmental management.

105. (B) Block code
Block coding is a raster data compression technique that works by identifying square or rectangular blocks of cells that all share the same attribute value. Instead of storing each individual cell, the method records the location, dimensions, and value of the entire block. This significantly reduces the amount of data required to represent large, uniform areas within a grid. It is one of several specialized methods used to improve storage efficiency in Geographic Information Systems while maintaining the integrity of the spatial data.

106. (C) A 2D area enclosed by a series of lines.
In the vector data model, a polygon is a fundamental geometric feature used to represent two-dimensional areas on a map. It is defined by a series of connected line segments that form a closed loop, returning to the starting point. Polygons are used to represent geographic features that have a measurable area, such as lakes, forest stands, administrative boundaries, or land parcels. Each polygon can be linked to descriptive attribute data, allowing for detailed mapping and spatial analysis.

107. (C) Mitigate losses by controlling development in hazardous zones.
The primary goal of land use regulation in disaster-prone areas is to reduce the potential for human and economic losses. By identifying high-hazard zones through mapping, authorities can implement rules that restrict or guide new construction away from these dangerous locations. This proactive approach minimizes the number of people and assets exposed to threats like floods or landslides. Such regulations are a critical component of long-term disaster mitigation strategies, helping to build more resilient communities and sustainable urban environments.

108. (A) NDMA projects like the Database for Emergency Management.
In India, the National Disaster Management Authority leads several key initiatives that heavily utilize geospatial technology for disaster risk reduction. A primary example is the development of a comprehensive Database for Emergency Management, which integrates remote sensing data and Geographic Information Systems. This database provides critical spatial information for hazard mapping, vulnerability assessment, and real-time response coordination. These national projects are essential for enhancing the country's disaster preparedness and response capabilities through the systematic application of modern geospatial tools.

109. (D) Data in a GIS is exclusively non-spatial.
A Geographic Information System is composed of hardware, software, people, methods, and data. Hardware includes computers and peripherals, while software provides the necessary analytical tools. People are required to manage and operate the system, and methods refer to specialized procedures. However, the data in a GIS is not exclusively non-spatial. In fact, the defining characteristic of a GIS is that it must contain both spatial data identifying locations and non-spatial attribute data describing the features at those locations.

Downloaded from www.pdf.tube

this information with hazard maps, planners can identify high-risk zones and develop targeted mitigation strategies to reduce potential losses and improve community resilience.

96. (B) GeoTIFF (.tif)
GeoTIFF is a widely used raster data file format that embeds geographic metadata within a standard TIFF image file. It is the industry standard for storing satellite imagery, aerial photographs, and digital elevation models. In contrast, Shapefiles, KML, and GeoJSON are all vector-based formats used to represent discrete geographic features like points, lines, and polygons through coordinate data. Understanding these format differences is essential for ensuring data compatibility and proper visualization within different Geographic Information System software packages and platforms.

97. (A) Both Statement I and Statement II are true.
Geometric transformation is a mathematical process used in a Geographic Information System to correct various spatial distortions in datasets, such as those found in scanned paper maps or raw satellite imagery. This process aligns the data to a specific coordinate system. A map projection is a fundamental type of geometric transformation that converts the three-dimensional, curved surface of the Earth into a two-dimensional flat representation. Both are essential for ensuring that spatial data layers are accurately positioned and can be correctly overlaid.

98. (A) It simplifies the data structure into a raster grid.
Defining topology in a vector dataset provides several significant advantages, such as ensuring data integrity by preventing gaps or overlaps between polygons. It also enables advanced spatial analysis like network tracing for roads or utility lines and allows for the efficient identification of adjacent and connected features. However, topology is a characteristic of vector data and does not simplify the information into a raster grid. Vector and raster are distinct data models with different structures and purposes.

99. (C) Compressing large raster images.
MrSID, which stands for Multiresolution Seamless Image Database, is a sophisticated file format and technology specifically designed for the efficient compression of very large raster images. It uses wavelet-based compression to significantly reduce file sizes while maintaining high image quality and allowing for rapid viewing at multiple resolutions. This makes it ideal for handling massive satellite scenes or aerial photograph mosaics in a Geographic Information System, ensuring that high-resolution data can be managed and displayed without overwhelming system resources.

100. (D) 1, 2, 3, 4, and 5
A Geographic Information System is a powerful tool for disaster response planning because it can integrate and analyze diverse types of spatial and non-spatial data. Critical information such as hospital locations, coastal digital elevation models, satellite imagery of floods, population density from census records, and road networks can all be managed within a single system. By overlaying these layers, emergency managers can identify vulnerable areas, plan efficient evacuation routes, and allocate relief resources more effectively during a crisis.

NODIA

101. (C) 2, 3, 1, 4
A standard digital image processing workflow in remote sensing follows a logical sequence. The process begins with data acquisition from satellite or aerial sensors. Next, pre-processing is performed to correct radiometric and geometric distortions. Following this, image classification is used to categorize pixels into land cover types or other thematic classes. Finally, information extraction takes place, where meaningful insights and maps are derived from the classified data. This structured approach ensures that the final results are accurate and reliable.

102. (A) It evolved from mid-20th century land analysis systems.
The historical evolution of Geographic Information Systems is rooted in the mid-twentieth century as researchers sought better ways to manage and analyze large volumes of land-related information. A key development was the Canada GIS in the 1960s, which pioneered computer-based spatial analysis for resource planning. Over time, these early systems integrated concepts from cartography, computer science, and geography to become the sophisticated software we use today. This

features. By defining points, lines, and polygons through their X and Y coordinates, this model achieves high geometric accuracy. This makes it ideal for representing discrete objects with clear boundaries, such as property lines, administrative borders, or transportation networks. Each vector feature can also be associated with detailed attribute information, enabling comprehensive mapping and spatial analysis tasks.

118. (C) Statement I is true, but Statement II is false.
The core philosophy of a Geographic Information System involves viewing the world as a series of integrated thematic layers, each representing different information like land use, roads, or elevation. These layers are analyzed based on their shared geographic location. Contrary to being just a simple list of addresses, a GIS is fundamentally designed to manage and analyze data within a geographical context. It is this spatial framework that distinguishes a GIS from a traditional database management system without geographic capabilities.

119. (B) Correct distortions and align data to a coordinate system.
Geometric transformations, including operations like rotation, scaling, and translation, are applied in a Geographic Information System to correct various spatial distortions and align datasets to a specific real-world coordinate system. This is crucial for ensuring that different layers of data, such as scanned maps and satellite images, are accurately positioned relative to each other. By performing these mathematical adjustments, the system maintains spatial integrity, allowing for precise measurements and correct overlays, which are fundamental for all subsequent geographic analysis.

120. (C) Polarization
When electromagnetic radiation interacts with the Earth's surface, it primarily undergoes three processes: reflection, absorption, or transmission. Reflection involves energy bouncing off the surface, absorption occurs when energy is taken into the material, and transmission happens when energy passes through the object. While polarization describes the orientation of the oscillating electric field in a wave, it is not considered one of the three fundamental principles of surface interaction typically described in basic remote sensing energy balance equations.

121. (C) Overlaying maps to prioritize response and accessibility.
Immediately following a major disaster like an earthquake, the most critical function of a Geographic Information System is to support emergency response through map overlay. By integrating data on damaged infrastructure, road closures, and the locations of vulnerable populations, response teams can quickly identify priority areas for search and rescue. This spatial analysis allows for the optimization of resource allocation and ensures that aid reaches the most affected regions through the best available routes, significantly improving the efficiency of life-saving operations.

122. (A) 2, 4, 1, 3
The development of spatial analysis followed a clear chronological path. First, Ian McHarg pioneered manual overlay analysis in the 1960s using physical transparent maps. This was followed by the creation of the Canada Geographic Information System, the first true computer-based GIS. As technology advanced, desktop GIS software became widely available to professionals in the late twentieth century. Finally, the launch of high-resolution commercial satellites introduced extremely detailed imagery into the geospatial field, further expanding the capabilities of modern spatial systems.

123. (C) The name of a river.
Non-spatial data, also known as attribute data, provides descriptive characteristics about geographic features but does not specify their location. The name of a river is a classic example, as it describes the feature without providing its coordinates or geometry. In contrast, the coordinates of a city, the boundary of a park, and the route of a highway are all examples of spatial data because they define the location, shape, or path of those features on the Earth's surface.

124. (A) Both A and R are true and R is the correct explanation of A.
The vector data model is the preferred method for representing network features such as roads, rivers, and utility lines in a Geographic Information System. This is because the linear

Click Here to Buy book on Amazon

110. (A) P-3, Q-4, R-1, S-2
Each term in remote sensing and GIS is associated with a specific concept. Spatial resolution is directly related to pixel size, which determines the level of ground detail. A spectral signature is represented by a reflectance curve showing how a material interacts with energy. Topology is a fundamental aspect of the vector data model that defines spatial relationships. Hazard zonation is a key activity in disaster risk reduction, used to map and identify areas susceptible to various natural threats.

111. (B) It stores relationships enabling complex queries.
A topological vector data structure is significantly more powerful than a simple 'spaghetti' structure because it explicitly stores the spatial relationships between features, such as adjacency, connectivity, and containment. This added information allows the Geographic Information System to perform complex spatial queries and analysis that would be impossible otherwise. For example, it can determine which parcels share a boundary or identify all connected pipes in a water network, ensuring logical consistency and data integrity throughout the system.

112. (B) Application of multiple GIS operations.
This urban planning task involves several distinct Geographic Information System operations performed in sequence. First, attribute querying identifies parcels zoned for commercial use. Second, spatial analysis on a digital elevation model determines areas with a slope of less than 5%. Third, buffering or proximity analysis finds locations within 100 meters of a major road. Finally, an overlay operation combines these results to find the specific areas that meet all three criteria, demonstrating the power of integrating multiple spatial functions.

113. (B) 1, 2, and 3 only
Common GIS data formats serve different purposes. Shapefiles are standard for vector data, while GeoTIFF is widely used for raster images. KML is a format designed specifically for displaying geographic information in Earth browsers like Google Earth. However, a shapefile is not a single file; it is actually a collection of several files with the same name but different extensions, such as .shp for geometry, .dbf for attributes, and .shx for the spatial index, all working together.

114. (C) It involves digitizing, conversion, and extensive cleaning.
Data input is frequently the most expensive and time-consuming part of a Geographic Information System project because it involves the complex task of transforming analog information into a usable digital format. This process includes manually or automatically digitizing paper maps, converting files from different sources, and performing extensive data cleaning to fix errors. Ensuring the accuracy and integrity of spatial and attribute data requires significant labor and quality control, making it a major investment for any geospatial organization.

115. (A) Distinguishing subtle variations in water or vegetation stress.
High radiometric resolution increases the sensitivity of a remote sensing sensor to very small differences in the magnitude of electromagnetic energy. This capability is particularly valuable for detecting subtle variations in the spectral response of objects. For example, it allows researchers to distinguish between different levels of water turbidity or identify early signs of vegetation stress that might not be visible in lower-resolution data. This fine sensitivity is essential for detailed environmental monitoring and scientific analysis of surface properties.

116. (B) Representing the boundary of a region in a raster grid.
A chain code is a specialized raster data compression technique used to represent the boundaries of discrete regions within a grid. It works by identifying a starting cell on the perimeter and then using a sequence of direction vectors to trace the entire boundary. By only storing the sequence of movements required to follow the edge of the feature, this method significantly reduces the data needed to define shapes, making it more efficient than storing every cell inside the region.

117. (D) It uses coordinate pairs to define location and shape.
The defining characteristic of the vector data model is its use of precise coordinate pairs to represent the location and shape of geographic

Downloaded from www.pdf.tube

international cooperation and providing technical advisory services, global initiatives like UN-SPIDER help integrate remote sensing and Geographic Information Systems into national disaster response strategies, particularly in developing nations that may lack these specialized resources.

132. (B) P-4, Q-3, R-2, S-1
Various GIS data structures serve different functions. Run-length encoding is a compression technique for rows of identical raster values. Quadtrees compress raster data through recursive subdivision into quadrants. Topology defines the essential spatial relationships, such as adjacency and connectivity, between vector features. A Shapefile is a very common, non-topological vector file format used to store the location and attributes of geographic features. Understanding these distinct structures is fundamental for effective spatial data management and analysis within a GIS.

133. (A) Specular reflectance
Specular reflectance occurs when electromagnetic radiation interacts with a smooth surface, causing the energy to bounce off in a single, predictable direction. This interaction is similar to how light reflects from a mirror. In remote sensing, smooth surfaces like calm water bodies often exhibit specular reflectance. If the sensor is positioned correctly, it will detect a very strong signal; otherwise, the area will appear very dark. This contrast is a key characteristic used for identifying surface features in satellite imagery.

134. (C) Efficient storage of boundaries and networks.
A primary advantage of the vector data model is its ability to efficiently store and represent discrete geographic features with high geometric precision. By using coordinate-based points, lines, and polygons, it provides an accurate depiction of objects with well-defined boundaries, such as property parcels, administrative borders, and complex transportation or utility networks. This compact structure maintains the integrity of linear and area features far more effectively than a grid-based raster model, which generalizes these boundaries into cells.

135. (A) Both Statement I and Statement II are true.
Disaster risk reduction involves two distinct but related assessment processes. Hazard evaluation focuses on understanding the physical characteristics, intensity, and probability of occurrence of a threatening event, such as a flood or earthquake. Vulnerability assessment identifies the socio-economic and physical characteristics of a community that make it susceptible to the damaging effects of that hazard. Together, these assessments provide the essential information needed to understand and manage the overall risk to a specific area and its population.

NODIA

136. (D) Pixel Value
Visual image interpretation relies on several fundamental elements that help analysts identify features in satellite imagery. These include tone, which is the brightness or color; texture, the frequency of tonal change; and pattern, the spatial arrangement of objects. Shape, size, and shadow are also key elements. While pixel values represent the underlying digital data used by computers for automated processing, they are not considered one of the qualitative visual elements used by humans to interpret features in an image.

137. (B) A 2D array of pixels with digital brightness numbers.
In remote sensing, a digital image is fundamentally represented as a two-dimensional array of small, discrete units called pixels. Each pixel in the grid contains a specific digital brightness number, also known as a digital number, which corresponds to the intensity of electromagnetic radiation detected by the sensor for that specific ground area. This numerical representation allows for computer-based manipulation and analysis of the data through various algorithms, which is the cornerstone of modern digital image processing and analysis.

138. (C) Geometric transformation
Geometric transformation is the specialized process in a Geographic Information System used to modify the spatial organization of a dataset to fit a specific coordinate system. This often involves complex mathematical equations to correct for various distortions caused by sensor orientation, Earth's curvature, or scanning errors. By performing operations like rotation, scaling, and translation, different layers of spatial data can be precisely aligned and overlaid. This

nature and topological properties of networks, specifically connectivity, are more accurately and efficiently stored using vector lines and nodes. These structures allow the system to perform complex network analysis, such as finding the shortest path or tracing flow, far more effectively than a grid-based raster model, which would generalize these linear features.

125. (B) Rasterization
Rasterization is the process used in a Geographic Information System to convert vector data, composed of points, lines, and polygons, into a grid-based raster format. During this process, each geometric feature is assigned to the corresponding cells in the grid, and each cell is given a value based on the attributes of the vector data. This conversion is often necessary when integrating vector layers with raster datasets, such as satellite imagery, for specific types of spatial analysis or map modeling.

126. (B) 16-day temporal resolution
Temporal resolution in remote sensing refers to the frequency with which a satellite sensor can revisit and capture imagery of the same geographic location on Earth. If a satellite is designed to pass over and image the same area every 16 days, it is said to have a 16-day temporal resolution. This characteristic is critical for monitoring dynamic environmental processes that change over time, such as vegetation growth cycles, seasonal water levels, or urban expansion across a specific region.

127. (B) To provide a structured environment for attribute data.
A Database Management System serves as a core component of a Geographic Information System by providing a highly structured environment for managing non-spatial attribute data. It allows for the efficient storage, retrieval, and querying of descriptive information associated with geographic features. By organizing this data into relational tables and linking them to spatial features, the DBMS enables users to perform complex analyses that combine location-based information with detailed characteristics, facilitating more informed decision-making in diverse spatial applications.

128. (B) 1, 3, and 4 only
Geographic Information Systems and remote sensing are vital for disaster risk reduction through risk analysis and sustainable planning. Risk is calculated by considering both hazard probability and vulnerability. GIS allows planners to integrate hazard maps into land use regulations to guide safer construction. Furthermore, global initiatives encourage the sharing of geospatial data for better disaster management. While useful for floods, remote sensing can also assess damage from many other events. These technologies are applied across all phases, not just during response.

129. (B) Frequent monitoring of weather patterns over a region.
Geostationary satellites are positioned in a high-altitude orbit that allows them to remain fixed over a single geographic point on the Earth's equator. This unique characteristic makes them ideal for the continuous and frequent monitoring of weather patterns and atmospheric conditions over a specific region. They can capture updates every few minutes, providing essential data for tracking storms and forecasting weather. However, because of their high altitude, they generally provide lower spatial resolution compared to low-Earth-orbiting satellites used for mapping.

130. (B) Links geographic data with descriptive data for analysis.
The philosophy of a Geographic Information System is centered on the integration of spatial data, which identifies locations, with descriptive attribute data, which provides characteristics of those locations. This approach allows users to perform sophisticated analyses that uncover patterns and relationships based on geography. By linking "where" things are with "what" they are like, a GIS moves beyond simple map-making to become a powerful tool for solving complex spatial problems and supporting informed decision-making in many fields.

131. (A) UN-SPIDER Platform
UN-SPIDER is a prominent example of a global initiative dedicated to disaster risk management. It provides a platform that ensures all countries have access to and the capacity to use all types of space-based information to support the full disaster management cycle. By fostering

Click Here to Buy book on Amazon

and polygons—defined by precise coordinates. This approach is better suited for mapping distinct objects with well-defined boundaries, such as roads or parcels.

89. (A) 1 and 2 only
Atmospheric scattering occurs through different processes. Rayleigh scattering is most effective on shorter wavelengths and is caused by very small molecules. Mie scattering occurs when radiation interacts with larger particles like dust and smoke. Non-selective scattering is wavelength-independent, affecting all visible wavelengths equally. Conversely, absorption bands are regions where atmospheric gases absorb energy, rather than allowing it to pass freely. Understanding these interactions is essential for interpreting how electromagnetic radiation is modified as it travels through the atmosphere to a sensor.

90. (A) Passes over a point on Earth at the same local solar time.
A sun-synchronous orbit is a specific type of near-polar orbit designed so that the satellite passes over any given geographic location at approximately the same local solar time each day. This ensures that the sun's angle is relatively consistent for every image acquired, providing similar illumination conditions across different dates. This consistency is extremely valuable for monitoring changes in land cover and vegetation over time, as it minimizes variations caused by shadows and different lighting levels in the imagery.

91. (D) Spatial data includes location, while non-spatial describes characteristics.
The most fundamental difference between these two data types is the information they convey. Spatial data identifies the precise geographic location and geometric shape of a feature on Earth, answering the question of "where." Non-spatial data, also known as attribute data, provides descriptive information about that feature, such as its name, type, or specific properties, answering the question of "what." A functional Geographic Information System links these two together to enable comprehensive analysis based on both location and characteristics.

92. (B) Raw electromagnetic energy
A Geographic Information System is composed of five core components: hardware, software, data, people, and methods. Hardware includes the physical computers, while software provides the tools for spatial analysis. Data is the information being processed, and people are needed to manage and operate the system. Methods refer to the specialized procedures used to solve problems. While raw electromagnetic energy is a source of remote sensing data, it is not considered one of the five fundamental components of a GIS.

93. (C) Geometric properties unchanged by stretching or bending.
Topology in a Geographic Information System refers to the geometric properties and spatial relationships among features that remain invariant under continuous transformations, such as stretching, rotating, or bending. It explicitly defines how geographic entities like points, lines, and polygons are connected or situated relative to each other, including adjacency and containment. This mathematical framework is essential for maintaining data integrity during editing and for performing advanced spatial analysis, as it focuses on the underlying relationships rather than just coordinates.

NODIA

94. (D) It creates sharp boundaries for continuous phenomena.
The primary disadvantage of using a vector data model for continuous variables, such as elevation or temperature, is that it requires representing these smooth gradients as discrete features. This often results in the creation of sharp, artificial boundaries—like contour lines—where the actual phenomenon changes gradually. This representation can lead to inaccuracies in spatial modeling and analysis. The raster data model, which uses a grid of cells, is generally far more suitable for representing variables that vary continuously across geographic space.

95. (A) Assets susceptible to harm from a hazard.
A vulnerability map is a specialized spatial tool used in disaster management to show which people, infrastructure, or environmental assets are susceptible to the damaging effects of a specific hazard. It identifies the location and characteristics of vulnerable populations and critical facilities, such as schools or hospitals, within a potentially affected area. By combining

ensures that the digital data accurately represents geographic locations on the Earth's surface.

139. (C) Network analysis
Network analysis is a specialized Geographic Information System technique used to model and analyze the flow of resources or entities through a connected system of linear features. This is the most appropriate tool for finding the shortest or fastest driving route between two points on a street map. By using the topological connectivity between lines and nodes, the system can calculate paths based on various factors like distance, speed limits, or traffic conditions, facilitating efficient transportation planning and logistics.

140. (A) Both A and R are true and R is the correct explanation of A.
Modern disaster risk management relies heavily on remote sensing and Geographic Information Systems as these technologies provide indispensable tools across the entire disaster cycle. They enable precise hazard mapping and vulnerability assessment during the mitigation and preparedness phases. During an event, they provide real-time monitoring and rapid damage assessment to guide response efforts. Their ability to integrate and analyze complex spatial and descriptive data makes them essential for making informed decisions that protect lives and infrastructure from natural and man-made disasters.

141. (B) Point defined by a coordinate pair
The fundamental unit of the vector data model is a single point, which is defined by a precise coordinate pair, usually X and Y. All other geometric features in a vector system are built from these points. A line is a series of connected points, and a polygon is a closed loop of lines. This coordinate-based approach allows for high geometric precision in representing the location and shape of discrete geographic features on the Earth's surface within a Geographic Information System.

142. (B) Rayleigh scattering of blue light by gas molecules.
The sky appears blue because of Rayleigh scattering, which occurs when sunlight interacts with gas molecules and other small particles in the atmosphere. This process is highly selective, scattering shorter wavelengths of light more effectively than longer ones. As blue light has a relatively short wavelength compared to other visible colors, it is scattered in all directions throughout the atmosphere. To an observer on the ground, this scattered blue light appears to come from every part of the clear sky.

143. (A) 1, 2, 3 and 4 only
Remote sensing systems are characterized by four fundamental types of resolution. Spatial resolution relates to ground pixel size, spectral resolution defines the wavelength bands measured, temporal resolution describes revisit frequency, and radiometric resolution indicates sensitivity to energy differences. Each type is critical for different applications, and there is often a trade-off between them. However, it is incorrect to say that high spatial resolution is always better than temporal resolution, as the best choice depends entirely on the specific goals of the observation.

144. (B) Vector represents features; Raster represents space exhaustively.
A key distinction between the two primary GIS data models is how they represent geographic reality. The vector model focuses on discrete features, using points, lines, and polygons to represent objects with clear boundaries. In contrast, the raster model represents geographic space exhaustively by dividing the entire study area into a regular grid of cells. Every location in the raster grid has a value, making it ideal for continuous phenomena, whereas vector data only exists where features are specifically defined.

145. (A) Integrating spatial data to support informed decision-making.
In sustainable land use planning, the primary role of a Geographic Information System is to provide a framework for integrating and analyzing diverse spatial data layers. By overlaying information on environmental constraints, infrastructure, and socio-economic factors, planners can visualize complex relationships and evaluate the potential impacts of different development scenarios. This analytical capability supports more informed and balanced decision-making, helping to ensure that land use policies promote long-term ecological health, economic viability, and social equity in a systematic and transparent manner.

Downloaded from www.pdf.tube

146. (A) Slope map
A slope map is a spatial dataset created from a digital elevation model that calculates the rate of change in elevation across a terrain. In a Geographic Information System, this analysis determines the steepness or incline for each cell in the raster grid. Slope maps are essential for many applications, including identifying areas susceptible to landslides, planning transportation routes, and managing agricultural land. By visualizing where the terrain is steep or flat, researchers can better understand the physical characteristics of the landscape.

147. (D) Instigation
Remote sensing and Geographic Information Systems are applied across the standard phases of the disaster management cycle: mitigation, preparedness, response, and recovery. Mitigation involves long-term risk reduction, preparedness focuses on readiness before an event, response deals with immediate actions during a crisis, and recovery manages rebuilding. These technologies help map hazards, plan evacuations, assess damage, and coordinate reconstruction. However, 'instigation' is not a recognized phase of disaster management, as the goal is always to prevent or reduce the impact of disasters.

148. (D) 4
Geographic Information System concepts must be correctly paired with their functions. The raster model is a grid of cells, the vector model uses points, lines, and polygons for discrete features, and topology defines the spatial relationships between those features. However, projection is a mathematical transformation used to represent the three-dimensional Earth on a two-dimensional map surface. It is not used for managing attribute data; instead, attribute data management is the primary function of a Database Management System within the GIS framework.

149. (A) Radiometric resolution
Radiometric resolution determines the sensitivity of a remote sensing sensor to small differences in the intensity of electromagnetic radiation. It defines the number of distinct digital levels, or shades of grey, that can be used to record the data. A sensor with higher radiometric resolution can distinguish between very subtle variations in brightness, which is particularly useful for identifying different land cover types or monitoring environmental changes. This sensitivity is often expressed in terms of bits, representing the digital depth of the imagery.

150. (B) 2, 3, 4, 1
The energy of a photon is inversely proportional to its wavelength, meaning that shorter wavelengths possess higher energy. In the electromagnetic spectrum, ultraviolet radiation has the shortest wavelengths and highest energy among the given options. Visible light follows, then infrared radiation, and finally microwaves, which have the longest wavelengths and the lowest energy per photon. Understanding this energy hierarchy is important for selecting the correct spectral bands and sensors to study various physical and chemical processes on the Earth's surface.

NODIA

151. (B) Use of computers to manipulate digital sensor data.
Digital image processing in remote sensing refers to the comprehensive set of techniques and algorithms used to manipulate and analyze digital data acquired from sensors. Using computers, researchers can perform tasks such as image enhancement to improve visual quality, geometric correction to fix spatial distortions, and automated classification to identify land cover types. This digital approach allows for the systematic and efficient extraction of meaningful information from large satellite datasets, which can then be used for diverse scientific and environmental applications.

152. (C) Statement I is false, but Statement II is true.
A Shapefile is a very common vector format, but it is considered a 'non-topological' format because it does not inherently store complex spatial relationships like adjacency or connectivity. Instead, it only stores the geometry and attributes of features. To explicitly store and utilize complex topology for advanced spatial analysis, more sophisticated data structures such as those found in a Geographic Information System coverage or a modern geodatabase are required. These advanced structures maintain the logical connections between features for better integrity.

153. (B) Quadtree

A quadtree is a specialized raster data structure used for efficient compression and spatial indexing. It works by recursively dividing a two-dimensional grid into four equal quadrants. If all the cells within a quadrant have the same attribute value, that quadrant is stored as a single node in the tree. If the values differ, the quadrant is subdivided again into smaller quadrants. This hierarchical method is exceptionally effective for representing datasets with large areas of homogeneous values, significantly reducing the required storage space.

154. (C) P-4, Q-2, R-1, S-3
Remote sensing and Geographic Information Systems are used to analyze different natural hazards in specific ways. Flood management involves mapping the extent of inundation using radar or optical imagery. Landslide susceptibility is assessed by delineating zones based on slope, geology, and land cover. Forest fires are monitored by mapping active fronts and burn scars with thermal and near-infrared sensors. Earthquake impact is studied by mapping ground shaking intensity and identifying damaged infrastructure. Each hazard requires unique datasets and specialized spatial analysis techniques.

155. (B) A projection is necessary to display 3D Earth on a 2D map.
Because the Earth is a three-dimensional, curved sphere, any attempt to represent it on a two-dimensional flat surface, such as a paper map or a computer screen, requires a map projection. A projection is a mathematical transformation that converts geographic coordinates into a flat plane. However, this process always introduces some form of distortion in area, shape, distance, or direction. Therefore, the choice of projection is a critical step in a Geographic Information System project, as it impacts the accuracy of spatial analysis.

156. (C) Damage assessment
Damage assessment is a critical application of remote sensing that involves identifying changes on the Earth's surface caused by a disaster. This is typically achieved by performing change detection analysis using satellite imagery acquired both before and after the event. By comparing these images, analysts can rapidly locate and quantify the extent of damaged infrastructure, flooded areas, or destroyed vegetation. This aerial perspective is essential for providing emergency managers with the synoptic information needed to prioritize response and recovery efforts.

157. (A) Both A and R are true and R is the correct explanation of A.
The distinction between spatial and non-spatial data is the core foundation of any Geographic Information System. Spatial data identifies the precise location and shape of features, while non-spatial data provides descriptive attributes about them. The true power of GIS lies in its ability to link these two data types, allowing users to perform complex location-based queries and analysis. By connecting "where" something is with "what" its characteristics are, GIS provides a comprehensive framework for understanding and managing geographically referenced information.

158. (B) Many cities are located within a single state.
In the context of a Geographic Information System database, a many-to-one relationship describes a situation where multiple features in one dataset are associated with a single record in another. A classic example is the relationship between cities and states; many individual city features can be located within the boundary of one single state. Understanding these database relationships is fundamental for effective data modeling and for performing complex spatial joins and queries that involve multiple layers of geographic and attribute information.

159. (C) Mie scattering
Mie scattering occurs when electromagnetic radiation interacts with atmospheric particles that have diameters approximately equal to the wavelength of the radiation. Common examples of such particles include dust, smoke, and pollen. Unlike Rayleigh scattering, which is highly wavelength-dependent and affects very small molecules, Mie scattering occurs in the lower atmosphere where these larger particles are more concentrated. This process significantly affects how energy is scattered and attenuated, influencing the quality of satellite imagery and overall atmospheric visibility during remote sensing observations.

160. (A) 1 and 3 only

Click Here to Buy book on Amazon

174. (C) Raster - Grid Cell
The raster data model represents geographic space as a continuous surface divided into a regular grid, where each individual grid cell or pixel is the most basic building block. Each cell contains a value representing information about that specific location. In contrast, the vector data model represents discrete features using coordinate-based points, lines, and polygons. While a pixel is the unit for a raster, a polygon is a higher-level feature in the vector model. Understanding these fundamental pairings is essential for data organization.

175. (A) Both A and R are true and R is the correct explanation of A.
Atmospheric windows are indispensable for satellite-based remote sensing because they represent specific wavelength bands where the Earth's atmosphere is relatively transparent. Sensors must be designed to operate within these windows to minimize the interference caused by atmospheric absorption and scattering from gases like water vapor and carbon dioxide. By focusing on these clear regions of the spectrum, sensors can capture high-quality data from the ground with minimal signal degradation. This ensures that the information received accurately reflects the surface characteristics being observed.

176. (B) A raster grid where each cell stores an elevation value.
A raster grid is the most effective technique for representing a continuous variable like elevation in a Geographic Information System. In this model, the entire study area is divided into a regular grid of cells, and each cell is assigned a specific elevation value. This allows for a smooth and continuous representation of the terrain's surface, facilitating various types of topographic analysis such as calculating slope or aspect. While vector features like contours can represent elevation, they create artificial, discrete boundaries.

177. (C) Ensure logical consistency and enable spatial analysis.
A key function of topology in a vector-based Geographic Information System is to establish and maintain logical consistency between different geographic features. By explicitly defining spatial relationships such as adjacency and connectivity, topology prevents errors like gaps or overlaps between polygons. Furthermore, these relationships are essential for enabling advanced spatial analysis, such as network tracing or identifying neighboring features. This mathematical framework ensures that the spatial data accurately represents the real world and supports reliable and complex geographic operations.

178. (D) Disaster Preparedness
Mapping fire hydrants and identifying nearby houses is a classic application of disaster preparedness using a Geographic Information System. By performing this proximity analysis before an emergency occurs, fire departments can ensure they have adequate resources and identify potential gaps in coverage. This information is vital for developing effective emergency response plans and ensuring that fire crews can act quickly and efficiently when a fire breaks out. Such proactive measures are essential for building safer and more resilient communities through better resource planning.

179. (A) P-4, Q-2, R-1, S-3
Each term in remote sensing is associated with a specific functional definition. A passive sensor is one that records naturally available electromagnetic radiation, such as reflected sunlight. An active sensor, like radar, provides its own energy source to illuminate the target. A spectral signature is the unique, wavelength-dependent reflectance pattern characteristic of a specific object or material. An atmospheric window is a region of the electromagnetic spectrum characterized by high atmospheric transmittance, allowing radiation to pass through with minimal absorption.

180. (A) Abstraction and representation
The process of representing a real-world object as a geometric feature in a Geographic Information System is a fundamental act of abstraction. Because it is impossible to capture every single detail of reality, cartographers and GIS analysts must simplify complex features into points, lines, or polygons. Representing a lake as a polygon simplifies its three-dimensional nature into a two-dimensional shape defined by coordinates. This abstraction allows for the digital storage, management, and analysis of geographic

NODIA

Run-length encoding is a well-known raster data compression technique that works by identifying and storing sequences of identical cell values in a row. While it is highly efficient for datasets with large, homogeneous areas—where many adjacent cells share the same value—it is not effective for complex images. In images where pixel values change frequently and rapidly across the grid, the method may not provide significant compression and could even result in a larger file size than the original uncompressed data.

168. (A) Identifying parcels in flood hazard zones for restrictions.
Using a Geographic Information System for sustainable land use regulation involves integrating spatial data to guide development away from dangerous areas. By overlaying property parcel maps with detailed flood hazard zones, planners can identify which specific plots of land are at high risk. This allows authorities to implement legally binding restrictions or building codes designed to minimize future losses. This proactive application of geospatial technology is a core strategy for reducing community vulnerability and promoting long-term resilience to natural disasters.

169. (B) EMR reflected/absorbed/transmitted across wavelengths.
The spectral response of a material refers to the unique way it interacts with electromagnetic radiation across the spectrum. Every substance reflected, absorbs, or transmits energy differently depending on the wavelength and the material's physical and chemical composition. By measuring this response, remote sensing sensors can create a spectral signature for different features. This distinctive pattern allows for the identification and classification of various land cover types, such as distinguishing between different species of vegetation or types of soil from a distance.

170. (A) Managing large volumes of info for resource planning.
The historical development of Geographic Information Systems was primarily driven by the need for more efficient ways to manage and analyze large volumes of complex information for regional and resource planning. As governments and organizations faced increasingly complicated land management challenges, traditional paper maps became insufficient. Advances in computer science provided the necessary tools to store and process spatial data digitally. This led to the creation of the first GIS, which revolutionized how spatial information is used for decision-making across diverse fields.

171. (B) 2, 3, and 4 only
Active remote sensing systems are characterized by having their own internal source of electromagnetic energy, which they use to illuminate the Earth's surface. This allows them to acquire data independently of sunlight, making them operational even at night. RADAR is a primary example of an active system, as it emits microwave pulses and records the backscattered signal. In contrast, passive systems, such as standard cameras or multispectral scanners, rely on naturally available energy sources like reflected solar radiation or thermal emission.

172. (B) Geographic Information System (GIS)
A Geographic Information System is defined as an integrated framework composed of hardware, software, data, people, and methods. Its primary purpose is to capture, manage, analyze, and present information that is geographically referenced to the Earth's surface. By linking spatial locations with descriptive attribute data, a GIS provides a powerful tool for visualizing patterns, performing complex spatial analysis, and supporting informed decision-making. This comprehensive approach distinguishes a GIS from other information systems that do not have the capability to handle geographic data.

173. (A) Higher vulnerability leads to higher risk if hazard is present.
In disaster risk reduction, vulnerability and risk are closely linked components of a single framework. Vulnerability refers to the socio-economic and physical characteristics that make a community susceptible to harm. If a natural hazard is present in an area, a higher level of vulnerability will directly result in a higher overall risk of loss or damage. Reducing risk involves implementing strategies to decrease vulnerability, such as improving infrastructure quality or enhancing community preparedness, thereby lessening the potential impact of future hazardous events.

NODIA

215. (A) Both Statement I and Statement II are true.
There are two primary spatial data models used in Geographic Information Systems. The raster model represents the world as a tessellation of regular grid cells, where each cell contains a value representing information about that location. The vector model represents features using coordinate-based points, lines, and polygons to define the location and shape of discrete objects. Both models are fundamental to spatial technology, with the choice between them depending on the specific characteristics of the data and the requirements of the analysis.

216. (A) Provide rapid coverage of large, inaccessible areas.
One of the most significant advantages of using remote sensing for damage assessment is its ability to provide rapid and comprehensive coverage of very large areas, including those that may be dangerous or inaccessible on the ground. Immediately following a major disaster, satellite imagery can be used to quickly visualize the extent of the impact across an entire region. This synoptic view allows emergency managers to prioritize their response efforts, identify critical infrastructure failures, and coordinate search and rescue operations far more effectively.

217. (C) Near-Infrared
In the electromagnetic spectrum, different regions are defined by their specific wavelengths. Among the options provided, near-infrared radiation has a longer wavelength than any of the colors in the visible light spectrum. Blue light has the shortest wavelength, followed by green and then red. Because near-infrared wavelengths start just beyond the red portion of the visible spectrum, they represent the longest wavelength region listed. Understanding this hierarchy is essential for selecting the appropriate sensor bands to detect different physical and chemical properties.

218. (A) Vector model
The vector data model is the most suitable approach for network analysis in a Geographic Information System. This is because the vector model represents linear features, such as roads, rivers, and utility lines, as a series of connected lines and nodes with explicit topological relationships. These properties allow the system to accurately model the connectivity and flow within a network. This enables complex operations like finding the shortest driving path, identifying downstream flow in a river, or tracing utility outages far more effectively than a raster model.

219. (A) Mitigation
Prohibiting construction in coastal zones that have been identified as highly vulnerable is a proactive application of disaster mitigation. Mitigation involves implementing long-term strategies and regulations designed to reduce the overall impact of hazards before they occur. By using hazard maps to guide land use and restrict development in dangerous areas, authorities can minimize the number of people and assets exposed to threats like tsunamis or storm surges. This approach is a core component of building resilient communities and ensuring long-term sustainable development.

220. (D) Specular
Atmospheric scattering of electromagnetic radiation occurs through three primary physical processes: Rayleigh scattering, which affects very small molecules; Mie scattering, which involves larger particles like dust and smoke; and non-selective scattering, caused by large water droplets in clouds. While specular reflectance is a fundamental type of surface interaction where energy bounces off a smooth object in a single direction, it is not a form of atmospheric scattering. Understanding these distinct scattering processes is essential for interpreting how energy is modified as it travels through the air.

221. (A) 256
Radiometric resolution determines the sensitivity of a sensor to variations in the magnitude of received electromagnetic radiation. It is typically expressed in terms of bits, which define the number of digital levels used to record the data. A sensor with 8-bit radiometric resolution can distinguish between two to the power of eight unique values of brightness. This equals 256 distinct levels, ranging from zero to 255. This sensitivity allows the sensor to capture a wide range of intensities, enabling the detection of subtle spectral differences.

Downloaded from www.pdf.tube

information while maintaining its essential spatial characteristics.

181. (A) They are inversely proportional.
In the context of electromagnetic radiation, wavelength and frequency are linked by an inverse relationship governed by the constant speed of light. As the wavelength of a wave increases, its frequency must decrease, and vice versa. This means that waves with short wavelengths, such as X-rays, possess very high frequencies, while waves with long wavelengths, such as radio waves, have relatively low frequencies. This fundamental physical principle is essential for understanding how energy is organized and used throughout the electromagnetic spectrum for sensing.

182. (D) 1, 2, 3 and 4
Various raster data compression techniques are used to improve storage efficiency in a Geographic Information System. Run-length encoding records sequences of identical cell values, while quadtrees use a hierarchical subdivision process based on quadrants. Chain codes represent the boundaries of regions using unit vectors. MrSID is a modern, wavelet-based format specifically designed for handling very large images through multi-resolution storage. Each of these methods addresses different types of spatial redundancy, allowing for more efficient management of extensive satellite and aerial datasets.

183. (B) A floodplain boundary and a census map with population data.
To calculate the number of people living within a specific hazard zone, such as a 100-year floodplain, a disaster manager must perform an overlay of two primary data layers. The first is a spatial layer defining the boundary of the floodplain, and the second is a census map containing demographic and population data. By integrating these layers in a Geographic Information System, the manager can identify the specific geographic areas where the hazard and the population overlap, allowing for precise risk assessment.

184. (A) Multispectral
A multispectral sensor is one that is designed to detect and record electromagnetic radiation in several relatively broad wavelength bands across the spectrum. For example, a sensor capturing data in the blue, green, red, and near-infrared regions is classified as multispectral. These sensors are widely used for general land cover mapping and environmental monitoring. In contrast, panchromatic sensors capture data in a single wide band, and hyperspectral sensors use many hundreds of very narrow bands for detailed chemical and physical analysis.

185. (B) To correct distortions and register image to projection.
The primary purpose of a geometric transformation in remote sensing is to correct spatial distortions in a satellite image and align it to a specific geographic coordinate system. Distortions can be caused by the Earth's curvature, sensor orientation, or variations in the platform's altitude. By applying mathematical operations like rotation, scaling, and translation, the image is "rectified" so that each pixel correctly represents a real-world geographic location. This ensures that the imagery can be accurately overlaid and analyzed with other spatial datasets.

NODIA

186. (B) It provides tools for multi-user editing and complex queries.
A relational Database Management System offers several key advantages for managing attribute data within a Geographic Information System. It provides a robust and structured environment that supports simultaneous multi-user editing, ensuring data integrity across a large organization. Furthermore, it allows for the execution of complex queries using standard languages like SQL, enabling users to retrieve and analyze specific information based on multiple criteria. This powerful data management capability is essential for handling the extensive and detailed attribute information associated with geographic features.

187. (C) It is solely based on socio-economic data.
Hazard zonation is a fundamental spatial process used to delineate areas based on the level of threat from specific natural hazards, such as floods or landslides. It is a critical input for informed land use planning and emergency management. However, it is incorrect to say that hazard zonation is based solely on socio-economic data. Instead, it primarily relies on physical and environmental information, such as topography, geology, and

It provides a structured environment that allows users to efficiently query, update, and retrieve data based on specific characteristics. By linking these attributes to their corresponding spatial features, the DBMS enables the complex analysis and thematic mapping that are fundamental to the power and utility of a modern GIS for various applications.

202. (A) Grid structure makes overlay and math operations easy.
A key advantage of the raster data model in a Geographic Information System is its simple and consistent grid-based structure. This regular arrangement of cells makes it exceptionally easy and computationally efficient to perform various spatial operations, particularly map overlays and mathematical calculations. For example, researchers can easily combine multiple layers of environmental data to model suitability or predict trends. This simplicity is a major benefit for many types of complex spatial modeling and for representing variables that change continuously across geographic space.

203. (A) Formal means of representing spatial info digitally.
A spatial data model in a Geographic Information System is a formal framework used to digitally represent and organize information about the Earth's surface. It defines how geographic features are conceptualized and stored in a computer system. The two most common spatial data models are the vector model, which uses points, lines, and polygons, and the raster model, which uses a grid of cells. Each model has its own way of representing geographic reality, and choosing the appropriate one is fundamental for effective spatial analysis.

204. (B) P-4, Q-1, R-3, S-2
Raster data compression techniques use different methods to reduce file size. Run-length encoding records sequential cell values and their counts. Chain coding represents the boundaries of regions as a sequence of unit vectors. Quadtrees use a hierarchical approach, recursively dividing the grid into quadrants based on value homogeneity. Block coding identifies and stores square or rectangular blocks of identical values. Each method is designed to exploit different types of spatial redundancy within a raster dataset, improving storage efficiency and processing speed.

205. (A) Radar penetrates clouds; smooth water surfaces appear dark.
Using radar imagery for flood damage assessment is highly effective because microwave radiation can penetrate thick cloud cover, which often accompanies major storm events. Furthermore, smooth, standing water surfaces typically exhibit specular reflectance, which means most of the energy is reflected away from the sensor. This results in water appearing very dark or black in the radar image. By comparing these dark flooded areas with optical imagery taken before the event, analysts can accurately delineate the extent of inundation and assess the resulting damage.

206. (A) Establishing a central agency like NDMA to coordinate efforts.
A national initiative for disaster risk management involves organized efforts by a central government to enhance a country's resilience to natural and man-made disasters. A primary example is the establishment of a dedicated agency, such as the National Disaster Management Authority in India, to coordinate mitigation, preparedness, and response activities. These national-level organizations set policies, provide resources, and integrate advanced technologies like remote sensing and Geographic Information Systems into a unified framework for protecting the population and critical infrastructure across the entire nation.

207. (A) Both A and R are true and R is the correct explanation of A.
Establishing a functional Geographic Information System requires a significant investment of time and labor, particularly during the data input and editing phase. Acquiring high-quality, accurate information from various sources and converting it into a standardized digital format is a complex task. This process involves digitizing maps, cleaning data to fix errors, and performing quality control to ensure spatial integrity. Because these activities are labor-intensive and require specialized skills, they are widely recognized as the most resource-intensive and costly components of establishing a GIS project.

Click Here to Buy book on Amazon

borders, the vector data model is generally the far superior choice.

195. (A) Both A and R are true and R is the correct explanation of A.
Remote sensing systems often face inherent trade-offs between different types of resolution due to physical and technological constraints. For example, if a satellite has a fixed data transmission capacity, improving spatial resolution—making pixels smaller—often requires a compromise in other areas, such as reducing the spectral resolution or narrowing the swath width. These trade-offs are a fundamental part of sensor design, and mission planners must carefully balance these factors to meet the specific requirements of the observation task while working within the system's limitations.

196. (A) Reflection, Absorption, and Transmission
The energy balance equation is a fundamental principle in remote sensing that describes what happens when electromagnetic radiation reaches a surface. The total incident energy is partitioned into three distinct processes: reflection, where energy bounces off the surface; absorption, where energy is taken into the material and often converted to heat; and transmission, where energy passes through the object. The relative proportions of these three processes depend on the physical properties of the material and the wavelength of the incoming radiation.

197. (A) A framework for analyzing phenomena in geographic space.
The most accurate description of the philosophy of a Geographic Information System is that it provides a comprehensive framework for managing and analyzing phenomena within a geographic space. It goes far beyond simple map creation by linking spatial locations with descriptive attribute information. This approach allows users to visualize patterns, identify relationships, and perform complex spatial modeling. By integrating diverse datasets through their common geography, GIS enables a deeper understanding of the world and supports more informed and effective decision-making across many different fields.

198. (D) 1, 2, 3, 4, and 5
Remote sensing and Geographic Information Systems are highly versatile tools used for diverse tasks in disaster risk reduction. They can assess vegetation loss after fires, simulate potential floodwater paths, and map efficient evacuation routes. Furthermore, these technologies are used to identify vulnerable populations and support the implementation of land use regulations in hazardous zones. By integrating physical environmental data with socio-economic information, they provide a comprehensive approach to managing all phases of the disaster cycle, from long-term mitigation to immediate emergency response.

NODIA

199. (A) It stores info about connectivity, adjacency, and containment.
A topology-based Geographic Information System is one that explicitly stores and manages the spatial relationships between different geographic features. This includes information about which features are connected to each other, which polygons are adjacent and share boundaries, and which objects are contained within another area. By maintaining these relationships regardless of the coordinates, the system ensures logical consistency and enables advanced spatial analysis like network tracing or area-based queries. This capability is essential for ensuring data integrity and performing complex geospatial operations.

200. (A) Non-selective scattering
Non-selective scattering is the atmospheric process responsible for the white appearance of clouds and fog. It occurs when electromagnetic radiation interacts with particles that are much larger than the wavelength of the radiation, such as water droplets or large dust particles in the lower atmosphere. Unlike Rayleigh or Mie scattering, non-selective scattering affects all visible wavelengths equally. Because all colors of light are scattered uniformly in all directions, the resulting light appears white to the human eye when viewed from below or above.

201. (C) The Database Management System (DBMS).
In the context of a Geographic Information System, the Database Management System is the specialized software component responsible for organizing, storing, and managing large datasets, particularly the non-spatial attribute information.

Data input in a Geographic Information System involves various methods to convert information into a digital format. Digitizing is a primary technique used to manually or automatically trace features from paper maps into vector data. GPS is another common and highly accurate source for capturing precise geographic coordinates in the field. However, scanning a map does not create a vector file directly; it produces a raster image. Furthermore, data input is widely recognized as the most expensive and time-consuming project phase.

161. (A) It converts energy into another form, reducing intensity.
Atmospheric absorption occurs when specific gases, such as water vapor, carbon dioxide, or ozone, interact with electromagnetic radiation and convert the energy into another form, typically heat. This process reduces the overall intensity of the radiation at specific wavelengths as it passes through the atmosphere. The regions of the spectrum where this occurs are called absorption bands. For remote sensing to be effective, sensors must be designed to operate within atmospheric windows where such absorption is minimal, ensuring a clear signal.

162. (A) Topology
Topology is a critical component of a vector data structure that explicitly defines the spatial relationships between different geographic features. It focuses on properties such as adjacency, connectivity, and containment that remain unchanged even if the data is stretched or rotated. By storing how points, lines, and polygons are related to each other, topology ensures logical consistency and enables advanced spatial analysis within a Geographic Information System. This allows the system to perform complex tasks like network routing or area calculations effectively.

163. (B) Revisit time might be too long to catch rapid pest infestation.
In agricultural monitoring, the temporal resolution of a satellite—how often it revisits a site—is a critical factor. While a 3-day revisit time might seem frequent, some environmental threats like rapid pest infestations or fast-spreading diseases can cause significant damage within a shorter period. If the satellite passes too infrequently, the analyst might miss the early stages of the problem, leading to delayed response. Therefore, high temporal resolution is essential for monitoring dynamic processes that can change significantly in just a few days.

164. (B) Hazard evaluation assesses phenomena; risk adds vulnerability.
Hazard evaluation and risk assessment are distinct but related processes in disaster risk reduction. Hazard evaluation focuses on identifying and understanding the physical characteristics, location, and probability of a threatening event, such as a flood. Risk assessment goes further by integrating this hazard information with data on vulnerability and exposure. It evaluates the potential human, economic, and environmental impact by considering which populations and assets are susceptible to the hazard. Risk is thus the potential for loss resulting from these combined factors.

165. (C) Simplicity in representing continuous surfaces.
The vector data model offers several advantages, including a compact data structure for discrete objects, precise representation of boundaries, and the ability to store complex topological relationships. However, it is not well-suited for representing continuous surfaces where values change gradually across space, such as elevation or temperature. Modeling such phenomena in a vector format requires complex structures like contour lines or dense point networks, which can be computationally intensive. The raster model is generally far more efficient for representing continuous data.

166. (B) False color composite (e.g., NIR=Red, Red=Green, Green=Blue)
A false color composite is a common technique in remote sensing where different wavelength bands are assigned to the primary display colors (red, green, and blue) in a non-standard way. A classic example is assigning the near-infrared band to the red color, which makes healthy vegetation appear bright red because it reflects infrared energy so strongly. In this same display, water typically appears dark or black because it absorbs most of the radiation. This allows for better visualization of specific features.

167. (C) Statement I is true, but Statement II is false.

Downloaded from www.pdf.tube

NODIA

208. (A) To represent the 3D surface of the Earth on a 2D map.
The primary purpose of a map projection in a Geographic Information System is to provide a mathematical method for representing the curved, three-dimensional surface of the Earth on a two-dimensional flat plane. Because a sphere cannot be flattened without distortion, different projections are used to minimize errors in specific properties like area, shape, or distance. Choosing the correct projection is essential for ensuring that spatial data is displayed accurately and that spatial analysis, such as measuring distances or calculating areas, yields reliable results.

209. (C) Time interval between acquisitions of the same area.
Temporal resolution in remote sensing describes how frequently a satellite sensor can revisit and capture imagery of the same specific geographic location on Earth. It is defined as the time interval between successive acquisitions of data for the same area. This characteristic is vital for monitoring dynamic environmental changes that occur over time, such as tracking the progress of a flood, monitoring seasonal agricultural cycles, or observing urban growth. High temporal resolution is especially critical for effective disaster response and real-time environmental management.

210. (B) 1, 2, and 4 only
Geographic Information System data models are selected based on the features being represented. The vector model is ideal for discrete entities with clear boundaries, using points, lines, and polygons for representation. The raster model is better suited for continuous fields like elevation or temperature. While vector models can explicitly store topological relationships, such relationships are not inherent in the simple grid structure of the raster model. Understanding these fundamental differences is essential for effective data management and analysis within a modern geospatial system.

211. (C) Internet Connection
A functional Geographic Information System is composed of five core components: hardware, software, data, people, and methods. Hardware includes the physical computer systems, and software provides the analytical tools. Data is the core information being processed, while people are needed to manage and operate the system. Methods refer to the specialized procedures and business rules used to solve problems. While an internet connection is useful for sharing and accessing data, it is not considered one of the five fundamental building blocks of a GIS.

212. (A) Reflectance vs. Wavelength
A spectral signature graph is a fundamental tool in remote sensing used to identify and distinguish between different materials on the Earth's surface. It typically plots the percentage of electromagnetic energy reflected by an object against the specific wavelength of the radiation. Every material, such as water, soil, or different types of vegetation, possesses a unique reflectance curve across the spectrum. By analyzing these distinctive patterns, scientists can categorize land cover types and monitor environmental conditions using data captured by satellite sensors.

213. (A) Spatial pattern analysis
Using a Geographic Information System to analyze crime data and identify hotspots is a classic example of spatial pattern analysis. This process involves mapping the locations of incidents and using statistical tools to detect clusters or concentrations of activity that are not apparent from raw tables. By visualizing where events occur most frequently, city governments and police departments can gain insights into the underlying factors influencing crime. This allows for more targeted resource allocation and the development of effective prevention strategies based on geography.

214. (A) Aligning geographic data to a known coordinate system.
Georeferencing is the fundamental process of assigning real-world geographic coordinates to a digital image or dataset that does not already have them. This involves identifying specific "ground control points" in the data and linking them to their corresponding locations on the Earth's surface. By performing this process, different layers of spatial information, such as satellite imagery and property boundaries, can be accurately aligned and overlaid. This step is essential for any spatial analysis, as it establishes the necessary geographic framework.

historical event data. Socio-economic factors are more typically integrated during the subsequent vulnerability and risk assessment phases.

188. (A) Monitoring daily changes in sea ice extent.
High temporal resolution, which means a satellite revisits the same location very frequently, is most suitable for applications that require monitoring dynamic environmental processes that change over short periods. Tracking the daily movement and extent of sea ice is a primary example of this need. Frequent imagery allows scientists to observe rapid changes and trends in real-time. In contrast, tasks like creating a static city map or identifying stable geological features do not require high revisit frequency and focus more on high spatial resolution.

189. (C) Statement I is false, but Statement II is true.
While a Geographic Information System can certainly be used to create visually appealing maps, its true power lies far beyond simple map-making. The real strength of a GIS is its capability for advanced spatial analysis through the integration of diverse datasets. By overlaying different layers of geographic and attribute information, users can uncover complex relationships, model potential scenarios, and perform sophisticated queries that support informed decision-making. GIS is a comprehensive analytical framework, not just a tool for producing static cartographic displays.

190. (A) Imagery acquired under consistent illumination conditions.
A sun-synchronous orbit is specifically designed so that the satellite passes over any given location at approximately the same local solar time each day. This ensures that the sun's angle and the resulting illumination conditions remain relatively consistent across different image acquisitions. This consistency is extremely valuable for scientists monitoring changes in vegetation or land cover over time, as it minimizes variations in the data caused by shadows and different lighting levels, making it easier to detect actual environmental trends.

191. (A) A single x,y coordinate pair.
In the vector data model, a point feature is fundamentally represented by a single x,y coordinate pair. This represents a discrete location on the Earth's surface that has no measurable area or length at the scale of the map. Examples of point features include the location of a well, a city center, or a specific landmark. Every point can be linked to a row of attribute data in a table, allowing for the storage of detailed information about that specific location.

192. (A) 4, 1, 3, 2
Remote sensing platforms operate at various altitudes above the Earth's surface. At the lowest level, kites and balloons can be used for very local imaging. Manned aircraft typically fly at higher altitudes for regional aerial photography. Sun-synchronous satellites operate in low-Earth orbits, generally several hundred kilometers above the surface. Finally, geostationary satellites are placed in much higher orbits, approximately 36,000 kilometers above the equator, to remain fixed over a single point. This progression from ground to space defines the different levels of observation.

193. (D) Draping an image over 3D terrain for visualization.
Topology in a Geographic Information System focuses on the spatial relationships between features, such as which parcels are adjacent, which pipes are connected, or which houses are contained within a school district. These relationships are fundamental for spatial analysis and data integrity. However, topology is least relevant for tasks like draping an image over a three-dimensional terrain for visualization. This process is primarily a graphical rendering technique that involves mapping two-dimensional pixels onto a three-dimensional surface, rather than analyzing geometric relationships.

194. (A) Inefficient for discrete objects due to boundary generalization.
A primary disadvantage of the raster data model is that it is often inefficient for representing discrete geographic features with precise boundaries. Because the grid structure generalizes features into cells, linear objects like roads or area features like small land parcels can lose geometric detail, especially at lower resolutions. This leads to the "zigzag" or staircase effect along boundaries that are actually smooth. For applications requiring high geometric accuracy and clear definition of

Click Here to Buy book on Amazon

222. (A) The location of a well, represented by coordinates.
Spatial data in a Geographic Information System is defined by its ability to identify the precise location and geometric shape of a feature on the Earth's surface. The location of a well, specified by its geographic coordinates, is a classic example of spatial data. In contrast, the name of a city, the population of a country, and average annual rainfall are all examples of non-spatial attribute data. While they describe a feature, they do not provide the geometric information needed to place it in space.

223. (A) Storing areas of same-valued pixels to reduce redundancy.
Raster data compression techniques, such as run-length encoding, are designed to reduce file sizes by exploiting spatial redundancy within a grid. These methods work by identifying and efficiently storing areas or sequences of adjacent cells that share the same attribute value. Instead of recording every individual cell, the system stores the value and the location or count of the identical cells. This significantly reduces the amount of data required to represent uniform geographic features while maintaining the original spatial organization and integrity of the information.

224. (A) Mapping landslide risk areas using slope and rainfall data.
Hazard evaluation and zonation is the process of identifying and mapping geographic areas based on their susceptibility to specific natural threats. A primary example is using a Geographic Information System to integrate data on topography, such as slope steepness, with historical rainfall patterns to delineate zones at high risk for landslides. This spatial analysis helps planners understand where hazards are most likely to occur. This information is vital for long-term mitigation, land use planning, and establishing early warning systems to protect communities.

225. (A) Both A and R are true and R is the correct explanation of A.
The vector data model is generally considered inefficient for representing continuous phenomena such as elevation or temperature because these variables change smoothly and gradually across space. Representing a continuous surface with vector data would require an extremely large number of individual points or complex contour lines, leading to very large and unmanageable file sizes. In contrast, the raster data model, which uses a regular grid of cells, provides a much more natural and computationally efficient framework for modeling and analyzing variables that vary continuously across a geographic area.

226. (A) Computer Science
The historical evolution of Geographic Information Systems was significantly propelled by rapid advancements in the field of computer science during the mid-to-late twentieth century. As computers became more powerful and capable of handling large datasets, researchers developed the first digital systems for storing and analyzing spatial information. These technological breakthroughs provided the necessary framework for moving beyond traditional paper maps to digital mapping and automated spatial analysis. This integration of geography and computer science fundamentally revolutionized how we manage and interpret geographically referenced data across many fields.

227. (A) Frequency of tonal change and pixel arrangement.
In the context of satellite image interpretation, texture refers to the visual frequency of tonal change and the specific arrangement of pixels within a given area of an image. It describes the relative roughness or smoothness of a feature as it appears in the imagery. For example, a forest might exhibit a coarse, irregular texture, while a calm body of water or a paved parking lot would appear relatively smooth and uniform. Texture is a key qualitative element used by analysts to distinguish between different types of land cover.

228. (A) Overlay operations can be computationally intensive.
A significant disadvantage of the vector data model is that certain spatial operations, particularly complex overlays involving many layers and numerous small polygons, can be very computationally intensive. Calculating all the intersections and maintaining the topological integrity of the resulting features requires sophisticated algorithms and significant

Downloaded from www.pdf.tube

Spectral resolution refers to the number and width of wavelength bands a sensor can detect. Higher spectral resolution means the sensor can capture very narrow bands, allowing for the discrimination of materials with similar but slightly different spectral signatures. This capability is vital for distinguishing between various types of vegetation or minerals that require fine spectral detail for identification.

275. (C) the size of the smallest discernible object on the ground.
Spatial resolution is a measure of the smallest object or detail that can be distinguished on the ground in a digital image. It is determined by the size of the pixels, with smaller pixels providing higher resolution and more detail. This characteristic is critical for mapping small features and understanding the fine-scale distribution of objects across the studied landscape.

276. (A) To integrate diverse datasets using geographic location as a common link.
The fundamental philosophy of a Geographic Information System involves integrating different datasets using their geographic location as a common link. By connecting disparate information through spatial coordinates, GIS allows for a more comprehensive analysis of patterns and relationships. This integration moves beyond simple mapping, enabling complex problem-solving by considering how various factors interact within a specific space.

277. (D) The name and student population of a school.
Non-spatial data, often referred to as attribute data, describes the specific characteristics or qualities of a geographic feature rather than its location. Examples include names, categories, or numerical values like the student population of a school. While spatial data tells us where a feature is, non-spatial data provides the essential context about what that feature represents and its properties.

278. (B) the effectiveness of a GIS depends on the expertise of its users.
Including people as a core component of a GIS emphasizes that the system requires human expertise to function effectively. Skilled operators are needed to manage the hardware, use the software, and apply analytical methods to the data. The success of a GIS in solving spatial problems depends heavily on the knowledge and decision-making capabilities of the individuals using it.

279. (C) Spatial data describes location, while non-spatial data describes characteristics.
Spatial data and non-spatial data serve different roles within a GIS. Spatial data identifies the precise absolute or relative location of features, answering the question of where something is. In contrast, non-spatial or attribute data describes the characteristics and properties of those features, answering questions about what they are. Together, these data types provide a complete geographic representation.

280. (D) Global Positioning Systems.
A Geographic Information System is composed of five essential components: hardware, software, data, people, and methods. While tools like the Global Positioning System are frequently used to collect spatial data, they are considered external data sources rather than a fundamental component of the GIS itself. The synergy between the five core elements allows the system to perform complex analyses.

281. (A) The raster model.
The raster data model is particularly effective for representing continuous phenomena, such as elevation or temperature, which change gradually across space. It organizes the world into a regular grid of cells, where each cell contains a specific value for that location. This structure is ideal for surfaces because it provides a consistent and simple way to store varying data.

282. (B) the potential for large file sizes and "blocky" feature representation.
A major drawback of the raster data model is that high-resolution images can result in extremely large file sizes. Additionally, because the model uses a grid of cells, discrete features with clear boundaries may appear jagged or "blocky." This makes it less precise for representing sharp linear features or complex polygons compared to the coordinate-based approach of vector models.

283. (B) a point.
In the vector data model, features are represented using points, lines, and polygons based on their

NODIA

geographic boundaries, such as property lines or administrative borders. By using coordinate-based geometry, vector data maintains sharp definition and high geometric accuracy, making it the preferred choice for applications where the precise location and shape of specific entities are critical.

236. (D) A view that shows a large area at once.
A synoptic view is a key advantage provided by remote sensing platforms like satellites. It refers to the ability to capture a comprehensive image of a very large geographic area at a single point in time. This broad perspective is essential for identifying large-scale patterns and environmental trends that might be invisible from the ground. In disaster management, a synoptic view allows emergency responders to quickly understand the full extent of an event's impact across an entire region, facilitating better coordination and resource allocation.

237. (B) Simple grid structure and ease of computational overlay.
The primary advantage of the raster data model in a Geographic Information System is its simple and regular grid structure. This arrangement makes it exceptionally easy to perform complex mathematical and logical operations across multiple data layers, such as map overlays for suitability analysis. The consistent cell-based organization simplifies the algorithms required for processing, allowing for efficient analysis of continuous geographic variables across large areas. This makes the raster model a powerful tool for environmental modeling and sophisticated spatial decision-making processes.

238. (D) A set of line features with topological connectivity.
In the vector data model, a road network is most accurately represented by a set of line features that have explicit topological connectivity. Each road segment is a line defined by coordinates, and the places where roads meet are represented as nodes. By storing the connections between these lines and nodes, the Geographic Information System can model the flow through the network. This allows for advanced analysis such as finding the shortest driving path, which would be much less efficient using a grid-based raster representation.

239. (A) Rayleigh scattering
Rayleigh scattering is the dominant interaction of sunlight with the atmosphere when radiation encounters gas molecules and other very small particles that are significantly smaller than the wavelength of the light. This process is highly selective, scattering shorter wavelengths far more intensely than longer ones. This phenomenon primarily occurs in the upper atmosphere. Because blue light has a relatively short wavelength, it is scattered in all directions, which is the physical reason why the clear sky appears blue to an observer on the ground.

240. (B) Enable dynamic analysis and modeling via integration.
The philosophy behind using a Geographic Information System for land use planning is to move beyond static, paper maps toward a dynamic and analytical framework. By integrating diverse spatial and attribute data layers, GIS allows planners to model potential scenarios, visualize complex environmental relationships, and perform sophisticated impact assessments. This capability supports a more flexible and informed approach to decision-making, where the consequences of different policies can be systematically evaluated, ensuring that land use regulations promote long-term social, economic, and environmental sustainability for the community.

241. (A) Earthquake occurs under a city; damage to buildings is observed.
A classic cause-and-effect relationship in the context of disaster risk reduction is observed when a natural hazard, such as an earthquake, occurs in a populated area. The physical force of the ground shaking is the cause, and the resulting damage to buildings and infrastructure is the direct effect. Understanding these relationships is fundamental for hazard modeling and risk assessment. By studying how different intensities of hazards affect various types of structures, planners can develop better building codes and mitigation strategies to reduce future losses during similar events.

242. (A) 1, 2, 3, 4
A standard Geographic Information System project follows a logical workflow. The process begins by clearly defining the objectives and

Click Here to Buy book on Amazon

behaves, sensors can capture data about surface features, making it the fundamental bridge between the target and the observer.

257. (D) Because different regions provide unique information due to their differential interaction with materials.
Dividing the electromagnetic spectrum into distinct regions is vital because materials on Earth interact differently with various wavelengths. This differential interaction means that features may look the same in visible light but appear different in other bands. By analyzing these specific regions, scientists can identify and separate various materials, which provides remote sensing with its significant analytical power.

258. (A) Detecting thermal properties and vegetation status.
The infrared region of the electromagnetic spectrum is particularly important for analyzing thermal properties and the health of vegetation. Different wavelengths within this region help in identifying moisture content and the physiological status of plants. This specific capability allows researchers to monitor environmental conditions and agricultural productivity more effectively than using visible light alone, providing deeper insights into surface characteristics.

259. (C) It has a distinct advantage in all-weather remote sensing.
Microwaves possess the unique ability to penetrate through cloud cover, which gives them a significant advantage for all-weather remote sensing applications. Unlike visible or infrared radiation, which can be blocked by atmospheric conditions, microwaves ensure consistent data collection. This characteristic is particularly useful for radar systems, allowing for the continuous monitoring of the Earth's surface regardless of prevailing weather.

260. (A) selectively sense in specific wavelength regions to differentiate surface features.
The analytical strength of remote sensing lies in its capacity to selectively sense energy in different parts of the spectrum. This allows for the differentiation of surface features based on how they reflect or emit radiation at specific wavelengths. By using various spectral bands, analysts can distinguish between objects that might otherwise appear identical, enhancing the detail of thematic maps.

261. (D) Wavelength bands where EMR can pass through the atmosphere with little interference.
Atmospheric windows are specific regions of the electromagnetic spectrum where the atmosphere is relatively transparent. In these bands, radiation can pass through with very little absorption or scattering by gases and particles. Sensors must be designed to operate within these windows to successfully receive signals from the Earth's surface, as energy at other wavelengths is largely blocked by the atmosphere.

262. (B) It prevents EMR at certain wavelengths from reaching the sensor.
Atmospheric absorption occurs when constituents like water vapor, carbon dioxide, or ozone take in electromagnetic energy at specific wavelengths. This process effectively blocks that energy from reaching a sensor, resulting in a loss of information from the Earth's surface. Understanding which wavelengths are absorbed is crucial for designing sensors that can successfully capture reflected or emitted radiation for analysis.

NODIA

263. (C) the redirection of EMR by particles and molecules in the atmosphere.
Scattering is a process where electromagnetic radiation is redirected from its original path due to interactions with gas molecules and particles in the atmosphere. The intensity of this redirection depends on the size of the atmospheric particles relative to the radiation's wavelength. This interference can distort signals received by sensors, representing a critical factor during the remote sensing process.

264. (D) Because EMR is subject to the least amount of atmospheric attenuation in these bands.
Designing remote sensors to operate within atmospheric windows is essential because these bands experience minimal attenuation from absorption and scattering. If a sensor were tuned to a wavelength where the atmosphere is opaque, the signal would be lost before reaching the instrument. These windows provide the only clear paths for electromagnetic energy to carry information from Earth.

location-based data with detailed descriptive information.

249. (A) 1, 2, 3 and 4 only
Remote sensing and Geographic Information Systems provide critical support across all phases of disaster risk reduction. They are used for damage assessment, hazard zonation mapping, and risk analysis based on the combination of hazard and vulnerability. Furthermore, GIS facilitates the implementation of land use regulations for safer development. However, these technologies are not limited to the response phase; they are equally vital for long-term mitigation and preparedness planning. By integrating diverse physical and socio-economic data, they offer a comprehensive framework for managing disasters from beginning to end.

250. (A) Progressed from ground to aerial then to space platforms.
The historical evolution of remote sensing followed a logical technological progression over nearly two centuries. It began with early ground-based photography and later moved to aerial platforms, such as balloons and airplanes, to capture views from above. The development of rocket technology and satellite systems in the mid-twentieth century introduced the capability to observe the Earth from space. This progression from ground to sky to orbit has dramatically expanded our ability to monitor environmental changes, manage natural resources, and understand complex global processes on a massive scale.

251. (B) The analysis of data acquired by a device not in contact with the target.
Remote sensing focuses on gathering data from a distance, meaning instruments do not physically touch the objects they study. This fundamental principle distinguishes it from in-situ measurements. By using sensors to detect radiation emitted or reflected from targets, researchers can observe Earth's features from platforms like satellites or aircraft, enabling the study of large areas safely and effectively.

252. (A) In-situ measurement and sampling of the target.
The conceptual framework of remote sensing involves several distinct stages, including an energy source and the propagation of radiation through the atmosphere. It also encompasses the interaction between energy and the target, followed by detection by a sensor. Direct physical sampling or in-situ measurement is not part of this framework because the discipline relies specifically on non-contact data acquisition.

253. (C) a technological progression from simple photography to advanced digital systems.
The history of remote sensing is defined by a transition from basic aerial photography using cameras to modern satellite systems equipped with digital sensors. This technological progression has significantly improved the ability to gather precise data across various scientific fields. It reflects a continuous improvement in how energy is captured and interpreted to understand the Earth's surface more effectively.

254. (D) monitor large-scale phenomena and areas that are difficult to reach.
Remote sensing offers a distinct advantage by allowing the observation of large-scale environmental phenomena and regions that are otherwise difficult to access. Because it does not require physical proximity to the target, it is ideal for monitoring global patterns or hazardous environments. This capability is essential for modern environmental science, providing data that direct ground-based observations simply cannot achieve.

255. (C) the acquisition and analysis of information without direct contact.
Defining remote sensing as both a science and an art highlights the technical and creative aspects of interpreting data acquired from a distance. The core of this discipline involves using specialized devices to collect information about Earth's features without direct contact. This process allows for the analysis of complex surface properties and environmental conditions through the study of electromagnetic energy.

256. (B) Electromagnetic Radiation.
Electromagnetic radiation is the essential carrier of information within the remote sensing process, traveling from the Earth's surface to sensors. This energy propagates through space in waves, characterized by specific frequencies and wavelengths. By measuring how this radiation

Downloaded from www.pdf.tube

processing power. In contrast, the regular grid structure of the raster data model simplifies many of these mathematical and logical operations, making it much faster and more efficient for some types of multi-layer spatial modeling and analysis across large study areas.

229. (A) 1, 2, and 4 only
Satellite orbits are designed to meet specific observation needs. Geostationary orbits stay fixed over the equator, providing continuous monitoring of a large region. Sun-synchronous orbits pass over locations at the same local solar time, ensuring consistent illumination for vegetation monitoring. However, geostationary satellites are generally not used for high-resolution mapping because of their extremely high altitude. Furthermore, most orbits are slightly elliptical rather than perfect circles. Understanding these orbital characteristics is essential for selecting the right satellite data for specific scientific or planning applications.

230. (A) Non-spatial (attribute) data
The fundamental definition of a Geographic Information System emphasizes its unique ability to link spatial data, which identifies locations, with non-spatial attribute data, which describes the characteristics of those locations. This connection is what makes a GIS so powerful, as it allows users to perform analysis based on both "where" a feature is and "what" it is like. By integrating these two distinct types of information, a GIS provides a comprehensive framework for visualizing patterns, uncovering relationships, and supporting informed decision-making across a wide range of disciplines.

231. (A) Vulnerability
In the framework of disaster risk reduction, risk is conceptualized as a function of hazard and vulnerability. A hazard is a potentially damaging physical event, such as a flood or an earthquake. Vulnerability refers to the characteristics and circumstances of a community or system that make it susceptible to the damaging effects of that hazard. Risk represents the potential for loss and is the result of these two components interacting in a specific location where people and assets are exposed to the threatening event.

232. (B) P-2, Q-1, R-4, S-3
Different spatial tasks require specific technologies and concepts. Monitoring weather changes relies on high temporal resolution for frequent updates. Mapping property boundaries is best handled by the precise vector data model. Identifying crop stress involves analyzing the unique spectral signature of healthy versus stressed plants. Delineating susceptibility zones is a primary application of overlay analysis in a Geographic Information System. Integrating these various tools allows for a comprehensive approach to environmental management, urban planning, and effective disaster risk reduction across diverse geographic regions.

233. (C) Energy Balance Equation
The energy balance equation is a fundamental principle in remote sensing that describes what happens to incoming solar radiation when it reaches the Earth's surface. According to this law of conservation of energy, the total incident radiation must be accounted for through three primary processes: it must be either reflected off the surface, absorbed by the material, or transmitted through the object. The specific proportions of these three interactions depend on the physical and chemical properties of the material and the wavelength of the energy.

234. (D) Spatial relationships preserved under geometric transformation.
Topology in a Geographic Information System refers to the geometric properties and spatial relationships among features that remain unchanged even if the data is stretched, rotated, or bent. It explicitly defines how features like points, lines, and polygons are connected to each other, including properties like adjacency and connectivity. This mathematical framework is essential for maintaining logical consistency in spatial data during editing and for performing advanced analysis, as it focuses on the underlying spatial relationships rather than just the geographic coordinates.

235. (C) Statement I is false, but Statement II is true.
The relative size of raster and vector files depends on the complexity of the data and the resolution used. High-resolution raster files can often be significantly larger than equivalent vector files. However, the vector data model is generally much more precise for representing discrete

NODIA

265. (A) the energy at that wavelength would likely be absorbed or scattered by the atmosphere.
If an atmospheric window does not exist for a particular wavelength, the electromagnetic radiation at that frequency is likely to be absorbed or scattered. This means the energy would fail to reach a remote sensor, making the target undetectable from a distance. Consequently, such wavelengths are generally unsuitable for Earth observation because the atmosphere acts as an impenetrable barrier.

266. (B) The partitioning of incident EMR into reflected, absorbed, and transmitted components.
The Energy Balance Equation is a fundamental principle describing how incident radiation is distributed when it hits a surface. It accounts for the partitioning of energy into reflected, absorbed, and transmitted components. In remote sensing, understanding this balance is vital because it explains why different materials appear distinct based on the proportion of energy they reflect back toward the sensor.

267. (B) a pattern of spectral response plotted over a range of wavelengths for a feature.
A spectral signature represents the unique pattern of reflectance for a specific feature across a range of wavelengths. By plotting these response values, analysts can create a curve that serves as a diagnostic tool for identifying materials like water, soil, or vegetation. This distinct behavior is essential for accurately classifying different land cover types in digital satellite imagery.

268. (A) Because it allows for the identification and differentiation of various surface materials.
Spectral signatures are crucial because they provide a reliable way to differentiate between various surface materials based on their unique reflectance properties. Since different objects interact with electromagnetic radiation in specific ways, their signatures allow analysts to identify features even when they look similar. This uniqueness is the foundation for translating raw sensor data into meaningful maps of Earth.

269. (C) strongly reflects near-infrared energy and absorbs red light.
Healthy vegetation exhibits a characteristic spectral response by absorbing red light for photosynthesis while strongly reflecting near-infrared energy. This differential behavior creates a unique signature that distinguishes live plants from other surfaces like soil or water. Monitoring these specific reflectance patterns allows scientists to assess plant health and density, which is a vital application of modern technology.

270. (D) The proportion of energy reflected by the feature at different wavelengths.
Spectral response refers to the specific proportion of electromagnetic energy that a surface feature reflects at various wavelengths. Each material has a different response, which contributes to its unique spectral signature. Understanding these variations is necessary for remote sensing because it enables the identification and discrimination of different objects on the Earth's surface based on light interaction.

271. (C) Radiometric resolution.
Radiometric resolution describes how sensitive a sensor is to small differences in electromagnetic energy. This characteristic determines the sensor's ability to distinguish subtle variations in brightness or radiance within an image. A higher radiometric resolution allows for a more detailed representation of the intensity of the signal, which is essential for capturing fine details in various surface features accurately.

272. (B) temporal resolution.
Temporal resolution is defined by the frequency at which a satellite revisits and images a specific location on Earth. For monitoring rapidly changing events, such as the progression of a flood, high temporal resolution is necessary to provide frequent updates. This allows researchers to track the dynamic nature of the disaster and support timely decision-making during emergency response efforts.

273. (D) To act as the platform carrying the sensor.
In a remote sensing system, the satellite serves as the platform that carries the sensor instrument into space. Its primary role is to maintain a stable orbit, allowing the sensor to capture electromagnetic radiation from the Earth's surface consistently. While the sensor collects the data, the satellite provides the necessary altitude and movement to cover specific global areas.

274. (A) spectral resolution.

Click Here to Buy book on Amazon

requirements of the study. Next, the necessary data is acquired and pre-processed to ensure accuracy and spatial alignment. Following this, spatial analysis is performed to extract meaningful insights and uncover patterns from the integrated data layers. Finally, the results are presented through maps, reports, or visualizations to support decision-making. This structured approach ensures that the project is efficient and the final outputs are reliable.

243. (A) Compressing raster data.
A quadtree is a specialized hierarchical data structure primarily used in a Geographic Information System for the efficient compression and spatial indexing of raster data. It works by recursively dividing a two-dimensional grid into four equal quadrants. If all the cells within a quadrant have the same attribute value, that quadrant is stored as a single node. This method is exceptionally effective for representing datasets with large areas of homogeneous values, as it significantly reduces storage requirements while maintaining the original spatial organization of the information.

244. (A) Both A and R are true and R is the correct explanation of A.
A Geographic Information System is a powerful tool for vulnerability assessment because it allows for the integration of diverse spatial and non-spatial datasets. By overlaying layers of socio-economic data, such as population density and income levels, on top of detailed hazard maps, planners can identify which specific communities are most susceptible to harm. This spatial analysis reveals the intersection of physical threats and human vulnerability, providing essential information for developing targeted mitigation strategies and prioritizing resources for the most at-risk populations and critical infrastructure.

245. (D) Represents space as a grid of cells.
The vector data model is characterized by using coordinate-based points, lines, and polygons to represent discrete geographic features with high geometric precision. It is also capable of explicitly storing topological relationships between these features. However, representing geographic space as a regular grid of cells is the defining characteristic of the raster data model, not the vector model. These two models offer fundamentally different ways of conceptualizing and storing spatial information, and choosing the right one depends on the nature of the data being analyzed.

246. (C) Appropriate spectral resolution
Spectral resolution refers to the ability of a remote sensing sensor to define fine wavelength intervals within the electromagnetic spectrum. A sensor with high spectral resolution can detect energy in many narrow bands, which allows it to identify materials based on their unique reflectance and absorption patterns across those wavelengths. This capability is essential for distinguishing between different rock types or minerals that may appear identical to the human eye but have distinctive spectral signatures that can be detected and analyzed using specialized satellite data.

247. (A) Place data in a correct real-world coordinate space.
The primary goal of a geometric transformation in a Geographic Information System is to ensure that spatial datasets, whether raster or vector, are accurately positioned in a real-world coordinate space. This process corrects for various distortions caused by sensor orientation, Earth's curvature, or errors in analog map production. By applying mathematical adjustments like rotation, scaling, and translation, the data is aligned to a specific coordinate system. This is fundamental for ensuring that different data layers can be correctly overlaid and analyzed together for reliable geographic insights.

248. (B) A DBMS manages non-spatial attribute components.
In a Geographic Information System, a Database Management System serves as the specialized software engine for organizing and managing the non-spatial attribute components of the data. It provides a structured environment where descriptive information about geographic features is stored in relational tables. The DBMS allows users to efficiently query, update, and retrieve this attribute information based on specific characteristics. By linking these tables to their corresponding spatial features, the system enables the complex analyses that combine

NODIA

geometry. A single, discrete location like a well is most appropriately represented as a point. Points consist of a single set of coordinates and are ideal for features that are too small to be shown as areas at the specific map scale.

284. (A) Its precise representation of discrete features and compact data structure.
The vector data model is advantageous because it can represent discrete features with high geometric precision. It uses a compact data structure that stores coordinates for points, lines, and polygons, making it efficient for managing objects with clearly defined boundaries. This model is particularly useful for mapping features like property lines or road networks where exact shapes are required.

285. (C) the nature of the data and the intended analysis.
Choosing between raster and vector data models is primarily influenced by the nature of the information being represented and the specific goals of the analysis. Continuous data like elevation usually requires a raster format, while discrete features like boundaries are better suited for vector models. The intended spatial operations also dictate which model will be more efficient for tasks.

286. (D) To reduce the storage size of raster data files.
Techniques such as run-length coding and quadtree are vital for reducing the large storage requirements associated with raster data. High-resolution imagery often contains redundant information, which these compression methods aim to eliminate. By minimizing file sizes, these techniques make it easier to store, transfer, and process vast amounts of geographic data without losing essential characteristics of the image.

287. (C) storing sequences of identical cell values as a value and a count.
Run-length coding is a compression technique that reduces file size by identifying sequences of identical cell values within a row. Instead of storing every single cell individually, it records the value and the number of times it repeats consecutively. This simple method is highly effective for raster data that contains large areas of homogeneous values, significantly decreasing overall storage.

288. (B) Quadtree.
Quadtree compression involves a recursive process of subdividing a raster image into four equal quadrants. This subdivision continues until a quadrant is entirely homogeneous, meaning all of its cells share the same value. This method creates a variable-sized grid that is very efficient for representing large, uniform areas, as it avoids storing redundant data for every individual cell.

289. (D) a matrix of cells organized in rows and columns.
The fundamental structure of raster data is a grid or matrix composed of cells, also known as pixels, which are organized into rows and columns. Each cell within this matrix holds a specific numeric value that represents a characteristic of the Earth's surface at that location. This straightforward organization allows for simple mathematical operations during spatial analysis and processing tasks.

290. (A) viewing very large images at different resolutions.
MrSID is a sophisticated compression format designed to handle massive raster datasets efficiently. It allows users to view and navigate very large images at multiple levels of resolution without significant performance loss. This capability is especially important for handling high-resolution satellite imagery or aerial photography, where quick zooming and panning across large geographic areas are necessary for visual analysis.

NODIA

291. (C) The rules governing spatial relationships like adjacency and connectivity.
Topology within a vector data structure refers to a set of rules that explicitly define the spatial relationships between features. These relationships include connectivity, adjacency, and containment, and they are stored independently of the actual coordinates. This allows a GIS to perform complex spatial queries, such as identifying neighboring land parcels, much more efficiently than by using coordinate geometry.

292. (A) To efficiently manage attribute data and ensure its integrity.
Database Management Systems play a critical role in GIS by providing a robust framework for storing and managing non-spatial attribute data.

They ensure data integrity, reduce redundancy, and allow for efficient querying and retrieval of information. By integrating a DBMS, a GIS can handle large volumes of descriptive data while maintaining its relationship with the corresponding spatial features accurately.

293. (D) To register all data layers to a common coordinate system.
Applying map projections is a vital step in data preparation because it allows all layers in a GIS to be registered to a common coordinate system. Since different datasets may be created using various scales or systems, projections ensure they align correctly in space. This spatial consistency is necessary for performing accurate measurements and overlay analyses across multiple information layers.

294. (B) The explicitly stored topological information on adjacency.
The topological information regarding adjacency is particularly useful when an analysis requires finding features that share a common boundary. Instead of calculating the distance between all points, the system uses pre-stored relationships to identify neighboring polygons, such as land parcels next to a park. This makes spatial queries much faster and more reliable in sophisticated vector-based Geographic Information Systems.

295. (C) geometric transformation.
Geometric transformation is the process used to align different datasets so they are spatially consistent within a GIS. This is necessary when data layers have different orientations, scales, or originate from different sources. By transforming the coordinates of one dataset to match another, analysts ensure that features from multiple layers overlap correctly, which is essential for meaningful comparisons.

296. (D) By overlaying hazard maps with data on population and infrastructure.
Risk and vulnerability assessment is conducted by using GIS to overlay maps of natural hazards with data on human and physical assets. By combining hazard zonation with information on population density and infrastructure, analysts can identify which communities are most at risk. This spatial integration allows for a comprehensive understanding of potential impacts, which is essential for disaster planning.

297. (A) To conduct rapid damage assessment.
In the immediate aftermath of a disaster, remote sensing provides an essential synoptic view that allows for rapid damage assessment. High-resolution imagery can quickly reveal the extent of destruction to buildings, roads, and agricultural land across a large area. This information is vital for emergency responders to prioritize their efforts and allocate resources to the most severely affected areas.

298. (B) hazard evaluation and zonation.
Hazard evaluation and zonation is the proactive process of identifying and mapping regions that are susceptible to specific natural events. By using remote sensing data and GIS analysis, experts can delineate areas prone to landslides, floods, or earthquakes. These zonation maps serve as the foundation for further risk assessment and are critical for developing strategies to minimize impacts.

299. (B) informing land use planning and regulation for sustainable development.
Proactive disaster mitigation involves using spatial technologies to inform land use planning and regulation. By identifying high-risk areas before an event occurs, authorities can implement policies that restrict development in dangerous zones. This sustainable approach to development helps to minimize future losses by ensuring that infrastructure and housing are located in safer areas, reducing overall population vulnerability.

300. (A) RS provides data for hazard, vulnerability, and damage, while GIS is used for analysis, mapping, and planning.
The integration of remote sensing and GIS provides a complete system for disaster risk reduction. Remote sensing collects data on hazards, vulnerability, and damage from a distance. GIS provides tools for analyzing information, creating maps, and supporting planning. Together, they enable an effective and scientific approach to managing both natural and man-made disasters across various geographic scales.

Downloaded from www.pdf.tube

CHAPTER 09

Information and Communications Technology and Other Emerging Technologies

1. Which of the following best defines the role of Information & Communications Technology (ICT) in Disaster Management?
(A) The restricted use of satellite-based communication by specialized first response teams.
(B) Utilizing digital technology to manage information across all phases of a disaster lifecycle.
(C) Manually archiving disaster-related documents in physical public records offices.
(D) Government policy frameworks focused on providing financial assistance to survivors.

2. Read the following statements carefully and choose the correct option.
Statement I : Changing media environments, such as the rise of social media, have created new avenues for disaster communication.
Statement II : The efficient use of ICT is primarily concerned with reducing the cost of communication hardware.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

3. Read the following statements regarding ICT applications in disaster management:
1. ICT tools are only useful during the response phase of a disaster.
2. Disaster Informatics involves the use of information technology across the entire disaster lifecycle.
3. Multimedia educational applications can be used for enhancing risk reduction awareness.
4. The sole purpose of ICT in disaster management is to alert the public.

Which of the above statement(s) is/are correct?
(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 2, and 3 only
(D) 2, 3, and 4 only

NODIA

4. The term 'Disaster Informatics' primarily refers to which of the following?
(A) The historical study of disasters through ancient scripts.
(B) Software used for mapping specific earthquake epicenters.
(C) Legal frameworks governing information sharing in crises.
(D) Applying information science to understand and manage disasters.

5. A municipal authority wants to use a multimedia educational application to teach children about earthquake safety. Which feature would be most effective for risk reduction?
(A) A text-only document listing safety procedures.
(B) A technical video of experts discussing seismic activity.
(C) An interactive game simulating safe responses to tremors.
(D) A photo gallery displaying damage from past earthquakes.

6. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : The proliferation of social media has fundamentally changed the landscape of disaster communication.
Reason (R) : Social media platforms allow for real-time, multi-directional information flow

in urban search and rescue (USAR) operations.
Reason (R) : Robots can access small voids and unstable areas within collapsed structures that are too dangerous for human rescuers or search dogs.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

52. In the context of disaster alerting technologies, a "solution for future challenges" would most likely involve:
(A) Phasing out all older technologies like radio in favor of smartphone apps.
(B) Developing a single, universal alert system that replaces all local systems.
(C) Making all alert messages encrypted and accessible only by technical experts.
(D) Creating integrated, multi-modal systems that can target specific geographic areas and use multiple delivery paths.

53. Which of the following best exemplifies the use of Big Data in disaster management?
(A) A single digital spreadsheet tracking five localized relief trucks.
(B) A printed document listing names in a community relief shelter.
(C) Analyzing anonymized location data from mobile phones to map movements.
(D) A hand-drawn map used to identify local village hazards and risks.

54. Match the ICT term in List I with its correct description in List II and choose the correct option.
List I: (Term)
P. Disaster Informatics
Q. Computing Infrastructure
R. Multimedia Application
S. Alerting Technology
List II: (Description)
1. The servers, networks, and data centers that process disaster-related data
2. An interactive educational tool combining text, graphics, and video for risk awareness
3. The system used to broadcast warnings, such as the Common Alerting Protocol (CAP)
4. The interdisciplinary study of information and its use across all phases of a disaster
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-1, R-2, S-3
(C) P-2, Q-3, R-4, S-1
(D) P-4, Q-2, R-1, S-3

55. One of the main benefits of using sensor systems over manual observation is:
(A) They are less accurate but more affordable.
(B) They provide subjective opinions rather than objective data.
(C) They require no power source to operate.
(D) They can provide continuous, high-frequency data streams automatically.

56. All of the following are emerging technologies with significant potential for disaster risk management EXCEPT:
(A) Typewriters
(B) Artificial Intelligence (AI)
(C) Unmanned Aerial Vehicles (UAVs)
(D) Big Data Analytics

57. Read the following statements regarding the role of ICT for decision support in disaster mitigation:
1. Its main purpose is to automate decisions, removing the need for human managers.
2. It can help in prioritizing mitigation projects based on cost-benefit analysis.
3. It relies on the analysis of relevant data to provide insights for planning.
4. An effective system can simulate the potential impact of different mitigation measures.
5. It is only useful for short-term, immediate response decisions.
Which of the above statement(s) is/are correct?
(A) 1 and 5 only
(B) 2, 3, and 4 only
(C) 1, 2, and 3 only
(D) 3, 4, and 5 only

58. The design and deployment of a sensor network for landslide monitoring should prioritize:
(A) Strategic placement of sensors (e.g., extensometers, rain gauges) in geologically critical spots.
(B) Placing sensors in easily visible locations for

Click Here to Buy book on Amazon

(A) Cause: High sensor costs; Effect: Guaranteed data accuracy.
(B) Cause: Limited battery life; Effect: Wider geographic coverage.
(C) Cause: Real-time sensor use; Effect: Enhanced hazard warning.
(D) Cause: Non-networked sensors; Effect: Advanced data analytics.

14. A disaster manager needs to assess damage in a large, inaccessible area immediately after a flood. Which emerging technology would be most suitable for rapid initial assessment?
(A) Deploying a team of static ground-based robots.
(B) Analyzing historical social media posts from before the flood.
(C) Setting up a new database management system.
(D) Using Unmanned Aerial Vehicles (UAVs) equipped with cameras.

15. Arrange the following steps for utilizing an ICT-based decision support system in a logical sequence.
1. Implement the chosen mitigation strategy.
2. Collect and input relevant hazard and vulnerability data.
3. Analyze system-generated scenarios and recommendations.
4. Define the disaster mitigation problem and objectives.

(A) 1, 2, 3, 4
(B) 4, 2, 3, 1
(C) 2, 4, 1, 3
(D) 3, 1, 4, 2

16. What is the fundamental purpose of a sensor technology in the context of Disaster Risk Reduction (DRR)?
(A) To directly prevent a disaster from occurring.
(B) To detect and measure a physical property and convert it into a signal.
(C) To manage the logistics of relief supply distribution.
(D) To provide a platform for community discussions.

17. Read the following statements carefully and choose the correct option.
Statement I : A key benefit of sensor systems is their ability to provide real-time, continuous data from remote or hazardous locations.
Statement II : All sensor systems are inexpensive, easy to deploy, and require no maintenance.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

18. Identify the key considerations for the efficient use and deployment of sensor technologies in Disaster Risk Reduction (DRR):
1. Ensuring the sensor network has a reliable power supply and communication link.
2. Placing sensors in locations that are easily accessible, even if they are not optimal for data collection.
3. Integrating the sensor data into a larger information management and decision-support system.
4. Selecting the most expensive technology available, regardless of the specific hazard.

Which of the above statement(s) is/are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2 and 3 only
(D) All of the above

NODIA

19. Which of the following is an example of using sensor technology for monitoring environmental risks?
(A) Using social media to track public sentiment.
(B) Distributing printed brochures about cyclone preparedness.
(C) Using strain gauges and accelerometers to monitor the structural health of a bridge.
(D) Setting up a hotline for reporting incidents.

20. A rescue team is operating in a collapsed building after an earthquake. Which technology would be most beneficial for their emergency and rescue operations?
(A) A weather satellite providing regional cloud cover data.
(B) A database management system for storing historical earthquake data.
(C) A public-facing social media campaign.
(D) Acoustic sensors to detect sounds from trapped survivors.

software.

36. Read the following assertion and reason statements carefully and choose the correct option.

Assertion (A) : The design and deployment of sensor networks for DRR require careful consideration of the specific environmental context.

Reason (R) : A sensor network designed for monitoring volcanic gas emissions would be equally effective for detecting tsunami wave heights without any modification.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

37. A significant challenge in using Big Data for disaster management is related to:

(A) The small volume of data available during crises.
(B) The perfectly structured and clean nature of the data.
(C) Issues of data quality, veracity, privacy, and security.
(D) The lack of analytical tools capable of processing large datasets.

38. The use of a GIS to overlay a flood hazard map with a map of population density to identify high-risk areas is an application of ICT for:

(A) Emergency response.
(B) Decision support in disaster mitigation.
(C) Post-disaster recovery.
(D) Public relations management.

39. Match the sensor type in List I with its most likely application in Disaster Risk Reduction (DRR) in List II and choose the correct option.

List I: (Sensor Type)
P. Accelerometer
Q. Infrared Camera
R. Infrasound Sensor
S. Strain Gauge

List II: (Application)
1. Detecting volcanic eruptions or avalanches from a distance
2. Monitoring stress on a building's structural components
3. Measuring ground motion during an earthquake
4. Identifying heat signatures of survivors in debris or through smoke

(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-1, S-2
(C) P-2, Q-1, R-4, S-3
(D) P-4, Q-3, R-2, S-1

40. Which of the following is an INCORRECT pair regarding ICT tools and their function?

(A) Artificial Intelligence - Manually sorting paper-based application forms.
(B) Database Management System - Storing and organizing relief inventory.
(C) UAV - Providing a live video feed of an inaccessible area.
(D) Social Media - Spreading verified information and countering rumors.

41. All of the following are benefits of using sensor technologies in DRR, EXCEPT:

(A) Providing objective, quantitative data.
(B) Enabling automated, 24/7 monitoring.
(C) Operating indefinitely without power or maintenance.
(D) Allowing for monitoring of dangerous or inaccessible locations.

42. Read the following statements regarding the role of Database Management in Disaster Risk Reduction (DRR):

1. It is crucial for handling large volumes of data related to affected populations, relief supplies, and damage assessment.
2. Effective database management is only required during the recovery phase.
3. It helps ensure data integrity, consistency, and accessibility for various stakeholders.
4. A well-designed database can support decision-making by enabling quick queries and report generation.
5. The use of paper-based records is a form of modern database management.

Which of the above statement(s) is/are correct?

(A) 1, 3, and 4 only
(B) 2 and 5 only
(C) 1, 2, and 3 only
(D) All of the above

Downloaded from www.pdf.tube

(D) 2, 3, and 4 only

28. The concept of a "changing media environment" in the context of disaster communication refers to:
(A) The physical replacement of old television sets with new ones.
(B) The shift from a one-to-many broadcast model to a many-to-many interactive model.
(C) The decline in the quality of newspaper printing.
(D) The exclusive focus on radio for all emergency communications.

29. What is the main objective of using robotics in disaster scenarios?
(A) Managing the administrative tasks of an emergency operations center.
(B) Providing localized entertainment for populations in displacement shelters.
(C) Performing tasks in environments that are dangerous or inaccessible to humans.
(D) Replacing the need for human first responders with automated machines.

30. Arrange the following technologies in the approximate chronological order of their widespread application in disaster management.
1. Social Media Analytics
2. Satellite-based Remote Sensing
3. Telegraph Communication
4. GIS-based Hazard Mapping

(A) 3, 2, 4, 1
(B) 2, 3, 1, 4
(C) 1, 4, 2, 3
(D) 4, 1, 3, 2

31. In the context of disaster alerting technologies, what does the term 'redundancy' imply?
(A) Using multiple, independent communication channels to deliver the same alert.
(B) Sending the same alert multiple times through a single channel.
(C) Deleting alert messages after they have been read.
(D) Using highly technical jargon in alert messages.

32. Read the following statements about Machine Learning (ML) in Disaster Risk Reduction (DRR) carefully and choose the correct option.
Statement I : Machine Learning models can be trained on historical data to predict the probability of future events, such as aftershocks.
Statement II : A primary advantage of ML is its inability to process unstructured data like images or text.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

NODIA

33. Read the following statements regarding the key components of an effective ICT-based Decision Support System (DSS) for disaster mitigation:
1. A comprehensive database of hazard, exposure, and vulnerability information.
2. A model base containing analytical and simulation tools.
3. A user interface that allows managers to interact with the system and visualize results.
4. An exclusive focus on post-disaster recovery data.

Which of the above statement(s) is/are correct?
(A) 1 and 2 only
(B) 3 and 4 only
(C) 1, 2, and 3 only
(D) 2, 3, and 4 only

34. Which type of sensor would be most appropriate for creating an early warning system for flash floods in a narrow river valley?
(A) Water level sensors and rain gauges placed upstream.
(B) GPS sensors to track vehicle movement.
(C) Air quality sensors to measure pollution.
(D) Acoustic sensors to listen for traffic noise.

35. The efficient deployment of ICT tools in a disaster scenario is critically dependent on:
(A) The brand name of the hardware manufacturer.
(B) The number of features a software application has, regardless of their relevance.
(C) The pre-existence of robust infrastructure and trained personnel.
(D) The use of proprietary, closed-source

alerts sent only via smartphones or the internet may not reach elderly, low-income, or rural populations.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

67. Which of the following is an INCORRECT statement about the use of UAVs in disaster management?

(A) UAVs can create high-resolution 3D models of affected areas.
(B) Monitoring the progress of floods or wildfires.
(C) They have unlimited flight time and are not affected by weather conditions.
(D) Regulatory restrictions and airspace management can be a challenge to their deployment.

68. The use of ICT to analyze historical climate data, model future scenarios, and inform the construction of a sea wall is an example of its application in:

(A) Disaster response
(B) Disaster recovery
(C) Public awareness campaigns
(D) Disaster mitigation

69. Match the challenge of an emerging technology in List I with the corresponding technology in List II and choose the correct option.

List I: (Challenge)
P. Spread of misinformation and rumors
Q. Data privacy and security concerns
R. Airspace regulations and battery life limitations
S. Ethical considerations and algorithmic bias

List II: (Technology)
1. Big Data
2. Artificial Intelligence
3. Social Media
4. Unmanned Aerial Vehicles (UAVs)

(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-1, R-4, S-2
(C) P-2, Q-4, R-1, S-3
(D) P-3, Q-2, R-4, S-1

70. The computing infrastructure required to support Big Data analytics in Disaster Risk Reduction (DRR) would typically include:

(A) A single desktop computer with a basic internet connection.
(B) Scalable high-performance servers and specialized data software.
(C) A collection of unconnected laptops and mobile storage devices.
(D) Manual paper ledgers and analog data management systems.

71. Which of the following is NOT a type of sensor system used in Disaster Risk Reduction (DRR)?

(A) Seismic sensors for earthquake detection.
(B) Weather stations for monitoring storms.
(C) GPS sensors for tracking ground deformation.
(D) Political polling systems for election forecasting.

72. Read the following statements regarding the role of ICT in the changing media environment for disaster communication:

1. Citizen journalism via social media can provide valuable on-the-ground perspectives.
2. Authorities can use official social media accounts to disseminate verified information and counter rumors.
3. The media environment is now exclusively digital, and traditional media like radio are obsolete.
4. The speed of information flow has decreased significantly.
5. Interactive communication allows for public queries and feedback.

Which of the above statement(s) is/are correct?

(A) 3 and 4 only
(B) 1, 2, and 5 only
(C) 1, 3, and 4 only
(D) 2, 4, and 5 only

73. The primary purpose of a multimedia educational application for risk reduction is to:

(A) Provide entertainment during a disaster.
(B) Store a backup of important government documents.
(C) Increase awareness and knowledge of hazards and protective actions in an engaging way.

Click Here to Buy book on Amazon

43. What is the most significant potential negative impact of the public's use of social media during a disaster?
(A) Increased load on cellular networks.
(B) Distraction for emergency responders from their primary tasks.
(C) Creation of a permanent digital record of the event.
(D) Rapid dissemination of unverified information and rumors.

44. A city government is implementing a new, integrated ICT system for disaster management. Which competency is most critical for the emergency managers who will use this system?
(A) The ability to write complex computer code.
(B) The ability to interpret data visualizations and analytical outputs to make informed decisions.
(C) The ability to physically repair damaged fiber-optic cables.
(D) The ability to design and manufacture microchips for sensors.

45. Arrange the general stages of data processing in a sensor-based early warning system.
1. Data analysis and comparison with predefined thresholds.
2. Data acquisition by the sensor.
3. Dissemination of a warning message.
4. Data transmission to a central server.

(A) 2, 4, 1, 3
(B) 1, 2, 3, 4
(C) 4, 2, 1, 3
(D) 2, 3, 4, 1

46. Which term describes the technological infrastructure, including hardware, software, and networks, that supports sensor data collection and processing?
(A) Social Media.
(B) Disaster Informatics.
(C) Multimedia Application.
(D) Computing Infrastructure.

47. Read the following statements carefully and choose the correct option.
Statement I : UAVs can be deployed more quickly and at a lower cost than manned aircraft for initial damage surveys.
Statement II : The use of UAVs in disaster zones is entirely unregulated and poses no privacy concerns.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

48. Read the following statements regarding the valid applications of Artificial Intelligence (AI) and Machine Learning (ML) in disaster risk management:
1. Predicting the path and intensity of a cyclone based on meteorological data.
2. Automatically identifying damaged buildings from post-disaster satellite imagery.
3. Optimizing the distribution routes for relief supplies.
4. Manually piloting a helicopter for search and rescue.

Which of the above statement(s) is/are correct?
(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 2, and 3 only
(D) 2, 3, and 4 only

49. What is a primary limitation of relying solely on social media for official disaster communication?
(A) Information can be shared too quickly.
(B) Lack of access and digital literacy among certain vulnerable populations.
(C) The character limit on some platforms prevents effective communication.
(D) It is impossible to share images or videos.

50. The "efficient use" of ICT for disaster communication implies:
(A) Ensuring that the message is timely, accurate, and reaches the intended audience through appropriate channels.
(B) Using the newest and most expensive technology available.
(C) Communicating only with other government agencies and not the public.
(D) Broadcasting information only once to avoid network congestion.

51. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : Robots can be invaluable tools

Downloaded from www.pdf.tube

between authorities, the public, and affected individuals.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

7. Which of the following is an INCORRECT statement regarding alerting technologies in disaster management?
(A) Future challenges include overcoming the 'digital divide' to ensure alerts reach all populations.
(B) Current systems can include sirens, radio broadcasts, and mobile alerts.
(C) Solutions for the future involve integrating multiple communication channels for redundancy.
(D) Alerting technologies are exclusively government-controlled and cannot be used by private organizations.

8. What is the most appropriate primary goal of utilizing ICT applications for decision support in disaster mitigation?
(A) To provide accurate and relevant data to aid resource planning.
(B) To replace human decision-makers entirely with automated systems.
(C) To document decisions only after they have been implemented.
(D) To reduce the operational costs of the local disaster office.

9. Match the ICT application in List I with its primary function in disaster management in List II and choose the correct option.
List I: (Application)
P. Geographic Information System (GIS)
Q. Early Warning System (EWS)
R. Social Media Platform
S. Decision Support System (DSS)
List II: (Function)
1. Disseminating alerts and pre-disaster information
2. Crowdsourcing real-time situational awareness
3. Analyzing spatial data for vulnerability mapping
4. Modeling scenarios to aid in strategic planning
(A) P-3, Q-1, R-2, S-4
(B) P-1, Q-3, R-4, S-2
(C) P-3, Q-2, R-1, S-4
(D) P-4, Q-1, R-2, S-3

10. Identify the correctly paired ICT tool and its application in disaster risk reduction.
(A) Big Data Analytics - Analyzing datasets to find risk patterns.
(B) UAVs - Delivering financial aid to remote disaster survivors.
(C) Robotics - Managing administrative paperwork in relief camps.
(D) Machine Learning - Translating local news into foreign languages.

11. All of the following are considered ICT approaches in Disaster Management EXCEPT:
(A) Utilizing mobile networks for sending emergency alerts.
(B) Employing GIS for mapping hazard-prone areas.
(C) Using satellite imagery to assess post-disaster damage.
(D) Relying exclusively on traditional word-of-mouth communication.

NODIA

12. Read the following statements regarding the efficient deployment of ICT tools in disaster management:
1. It involves selecting tools that are too complex for local users to operate.
2. It requires pre-disaster training and capacity building for responders and communities.
3. It means using a single, one-size-fits-all technology for all types of disasters.
4. It includes ensuring systems are interoperable and can share data seamlessly.
5. It focuses on integrating technology only after a disaster has occurred.
Which of the above statement(s) is/are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 3, and 5 only
(D) 2, 4, and 5 only

13. What is the primary cause-and-effect relationship concerning the use of sensor technologies in environmental risk monitoring?

aesthetic purposes.
(C) Using sensors that measure irrelevant parameters like air temperature.
(D) Ensuring the sensors cannot transmit data wirelessly to maintain security.

59. A key application of machine learning in the analysis of social media data during a disaster is:
(A) To manually read every single tweet and Facebook post.
(B) To increase the number of characters allowed in a social media post.
(C) To physically build the servers that host social media platforms.
(D) To automatically filter and classify relevant messages, such as requests for help, from the noise.

60. Arrange the following events in a typical information flow using ICT for emergency response.
1. First responders receive a dispatch message with location and incident details.
2. A citizen reports an emergency via a mobile app.
3. Data is processed and verified at an emergency operations center.
4. Situational reports are sent back from the field to the operations center.

(A) 2, 3, 1, 4
(B) 1, 2, 3, 4
(C) 3, 2, 4, 1
(D) 2, 1, 3, 4

61. What is a primary ICT approach in the mitigation phase of disaster management?
(A) Broadcasting live video from the disaster zone.
(B) Coordinating search and rescue teams.
(C) Using GIS and modeling software to identify long-term risks and plan land use.
(D) Distributing food and water to survivors.

62. Read the following statements carefully and choose the correct option.
Statement I : The "changing media environment" solely refers to the increase in the number of government-owned television channels.
Statement II : Efficient use of ICT for disaster communication involves tailoring messages and channels to specific audiences.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

63. Read the following statements regarding the potential benefits of using robotics in emergency and rescue operations:
1. Ability to lift heavy debris.
2. Providing detailed maps of undamaged areas.
3. Inspection of hazardous material spills without endangering humans.
4. Performing complex surgical procedures in the field.

Which of the above statement(s) is/are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2, and 3 only
(D) All of the above

64. What is the most significant benefit of deploying a sensor network for monitoring a volcano?
(A) It can stop the volcano from erupting.
(B) It can detect precursory signals like ground deformation and gas emissions, enabling timely warnings.
(C) It allows tourists to get closer to the crater.
(D) It makes the volcano look more technologically advanced.

65. The "efficient deployment of ICT tools" for disaster management primarily means:
(A) Acquiring the largest possible number of tools.
(B) Deploying tools that are fit for purpose, reliable, and can be effectively used by the personnel on the ground.
(C) Restricting the use of ICT tools to a single, highly-trained expert.
(D) Using only tools developed within the last six months.

66. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : A major challenge for future alerting technologies is ensuring they are inclusive.
Reason (R) : The "digital divide" means that

Click Here to Buy book on Amazon

21. Read the following assertion and reason statements carefully and choose the correct option.

Assertion (A) : The use of Big Data analytics can significantly enhance disaster risk management.

Reason (R) : Big Data allows for the analysis of vast and varied datasets from sources like social media, sensors, and satellite imagery to identify patterns, predict impacts, and optimize response.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

22. Which of the following is a significant limitation of sensor systems in disaster management?

(A) They can only be used for earthquake detection.
(B) Vulnerability to damage from the very hazards they are meant to monitor.
(C) Inability to generate digital data.
(D) Requirement for a full-time human operator for each individual sensor.

23. What role does Artificial Intelligence (AI) play in disaster risk management?

(A) Manually entering disaster relief data into local spreadsheets.
(B) Manufacturing high-quality physical components for communication infrastructure.
(C) Translating formal news reports between different languages during a crisis.
(D) Automating complex data analysis to predict disaster paths and damage.

24. Match the emerging technology in List I with its specific application in Disaster Risk Reduction (DRR) in List II and choose the correct option.

List I: (Technology)
P. Robotics
Q. Machine Learning
R. Big Data
S. Unmanned Aerial Vehicles (UAV)

List II: (Application)
1. Predicting landslide susceptibility based on historical data patterns
2. Conducting search and rescue operations in hazardous, confined spaces
3. Rapidly mapping large, inaccessible disaster-affected areas
4. Processing massive streams of real-time data from multiple sources for situational awareness

(A) P-1, Q-2, R-3, S-4
(B) P-2, Q-1, R-4, S-3
(C) P-3, Q-4, R-1, S-2
(D) P-4, Q-3, R-2, S-1

NODIA

25. The use of social media in disaster management is an example of which ICT approach?

(A) A top-down, one-way communication model.
(B) A method for ensuring complete data privacy and security.
(C) A tool for crowdsourcing information and enhancing situational awareness.
(D) A replacement for traditional early warning systems like sirens.

26. Which of the following is NOT a primary application of Unmanned Aerial Vehicles (UAVs) in disaster management?

(A) Long-term psychological counseling for affected populations.
(B) Conducting detailed post-disaster damage assessments.
(C) Searching for missing persons in difficult-to-reach areas.
(D) Delivering small, critical medical supplies to isolated locations.

27. Read the following statements concerning the challenges of using social media in disasters:

1. Information shared on social media is always verified and accurate.
2. The spread of rumors and misinformation can cause panic and hinder response efforts.
3. The sheer volume of data can be overwhelming for authorities to process and analyze effectively.
4. Access to social media is uniform across all demographic and geographic groups.
5. It is exclusively used for official government broadcasts.

Which of the above statement(s) is/are correct?

(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 4, and 5 only

(D) Facilitate financial transactions for relief funds.

74. A disaster management agency is using a machine learning algorithm to analyze satellite images taken before and after a hurricane to estimate the number of damaged buildings. This is an application of:
(A) Artificial Intelligence
(B) Social Media
(C) Robotics
(D) Sensor Technology

75. Place the following ICT-related actions in a logical disaster management timeline, from pre-disaster to post-disaster.
1. Using UAVs to survey damage.
2. Using social media to manage donations and volunteers.
3. Using GIS to create a vulnerability map.
4. Broadcasting early warning messages via mobile phones.

(A) 3, 4, 1, 2
(B) 4, 3, 2, 1
(C) 1, 2, 3, 4
(D) 3, 1, 4, 2

76. The term "computing infrastructure" in the context of Disaster Risk Reduction (DRR) refers to:
(A) The physical buildings where emergency responders are housed.
(B) The underlying hardware, software, networks, and data centers that enable ICT functions.
(C) The network of roads and bridges used for evacuations.
(D) The team of people responsible for making decisions during a disaster.

77. Read the following statements carefully and choose the correct option.
Statement I : The design and deployment of sensor systems for DRR is a one-time activity that requires no further monitoring.
Statement II : Efficient use of sensor systems involves regular calibration, maintenance, and ensuring data is properly interpreted.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

78. Which of the following best describes the use of social media for situational awareness during a disaster?
(A) Official agencies broadcasting warnings without any interaction.
(B) Monitoring and analyzing public posts to get a real-time picture of conditions, damages, and needs.
(C) Using social media platforms exclusively for fundraising.
(D) Preventing citizens from posting any information related to the disaster.

79. The use of robots to enter and inspect a structurally compromised nuclear power plant after an earthquake is an example of leveraging technology to:
(A) Mitigate risks to human life.
(B) Reduce the cost of electricity.
(C) Provide public entertainment.
(D) Manage the facility's social media account.

80. A key challenge in using sensor technologies for emergency and rescue operations in a disaster zone is:
(A) The sensors provide too much accurate information.
(B) The potential for damage to the sensors and the supporting computing infrastructure.
(C) The lack of any known physical phenomena for sensors to measure.
(D) The refusal of rescue workers to use technology.

81. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : Integrating sensor data into a Decision Support System (DSS) can improve the effectiveness of disaster mitigation.
Reason (R) : A DSS can analyze real-time sensor data, compare it against risk models, and provide actionable recommendations to disaster managers.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.

Downloaded from www.pdf.tube

(C) A is true but R is false.
(D) A is false but R is true.

97. Which of the following is NOT a benefit of sensor technologies for monitoring environmental risks?
(A) High temporal resolution of data.
(B) Guaranteed immunity from damage during hazard events.
(C) Ability to monitor remote areas.
(D) Provision of quantitative data for scientific modeling.

98. An AI system that sifts through thousands of emergency calls, social media posts, and sensor readings to identify the most critical incidents and their locations is primarily aiding in:
(A) Prioritization and resource allocation during an emergency response.
(B) Long-term climate change modeling.
(C) Financial auditing of the response.
(D) Writing the post-disaster history report.

99. Match the ICT term in List I with its relevant concept in List II and choose the correct option.
List I: (Term)
P. Interoperability
Q. Scalability
R. Crowdsourcing
S. Data Veracity
List II: (Concept)
1. The ability of a system to handle a massive increase in data or users, especially during a crisis.
2. The accuracy and trustworthiness of data, a major challenge with Big Data and social media.
3. Obtaining information or input from a large number of people, typically via the Internet.
4. The ability of different ICT systems and organizations to work together and share information seamlessly.
(A) P-4, Q-1, R-3, S-2
(B) P-1, Q-4, R-2, S-3
(C) P-3, Q-2, R-1, S-4
(D) P-4, Q-3, R-2, S-1

100. The use of ICT applications for decision support in disaster mitigation is best described as:
(A) A process that replaces the need for community participation.
(B) A system for recording decisions after they have been manually made.
(C) A method focused only on improving communication during the response phase.
(D) A way to use technology to analyze complex information and evaluate different risk reduction options.

101. Which of the following is a key component of 'Disaster Informatics'?
(A) The integration of data, information, and knowledge to support decision-making in all phases of a disaster.
(B) The exclusive study of ancient disaster myths.
(C) The physical construction of disaster-proof shelters.
(D) The legal prosecution of individuals who spread rumors.

102. Which of the following is a major 'future challenge' for alerting technologies?
(A) Ensuring alerts can effectively reach and be understood by diverse populations, including those with disabilities.
(B) How to make alerts slower and less specific.
(C) Reducing the number of channels used for alerting to simplify the process.
(D) Figuring out how to use paper-based maps for real-time alerts.

NODIA

103. Read the following statements regarding different sensor types:
1. Acoustic sensors detect sound waves and can be used to locate trapped survivors.
2. Optical sensors, like cameras, are useless in disaster management.
3. Chemical sensors can be used to detect hazardous gas leaks after an industrial accident.
4. Thermal sensors (infrared) can detect heat signatures, useful for finding people or fire hotspots.
Which of the above statement(s) is/are correct?
(A) 1, 3, and 4 only
(B) 1 and 2 only
(C) 2 and 4 only
(D) All of the above

community-led recovery.
(D) A formal deployment of a government ICT tool.

90. Arrange the following actions in a logical order for deploying a sensor-based warning system.
1. Install sensors and connect to computing infrastructure.
2. Disseminate warning to the public when threshold is breached.
3. Conduct a site survey and design the sensor network layout.
4. Test and calibrate the entire system.

(A) 1, 3, 4, 2
(B) 3, 1, 4, 2
(C) 4, 2, 1, 3
(D) 2, 4, 3, 1

91. What is the most appropriate use of ICT for decision support in the recovery phase of a disaster?
(A) Predicting exactly where the next disaster event will occur.
(B) Issuing initial evacuation orders to the general public.
(C) Developing long-term regional land-use and safety policies.
(D) Tracking resource allocation and managing aid distribution.

92. Read the following statements carefully and choose the correct option.
Statement I : The primary benefit of using robotics in search and rescue is to replace the need for search dogs.
Statement II : Robots can be equipped with various sensors, such as cameras and gas detectors, to assess conditions in hazardous environments.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

93. Read the following statements regarding the potential challenges associated with the use of emerging technologies like AI and Big Data in disaster management:
1. The need for significant investment in computing infrastructure and skilled personnel.
2. Ethical issues related to data privacy, surveillance, and algorithmic bias.
3. The risk of over-reliance on technology without critical human oversight.
4. The technology is completely immune to cyber-attacks.
5. These technologies eliminate the need for any on-the-ground information.

Which of the above statement(s) is/are correct?
(A) 1, 2, and 3 only
(B) 4 and 5 only
(C) 1, 4, and 5 only
(D) 2 and 3 only

94. Which scenario best illustrates a "current state" solution for an alerting technology?
(A) Telepathic communication between a disaster manager and a citizen.
(B) A universal translator implant that deciphers any warning.
(C) An AI that predicts disasters with 100% certainty a year in advance.
(D) A system that sends a text message (SMS) to all mobile phones in a specific geographic area.

95. The efficient deployment of UAVs for disaster response requires:
(A) Trained and licensed pilots, a clear mission objective, and a system for managing and analyzing the collected data.
(B) A large, paved runway in the middle of the disaster zone.
(C) Weather conditions to be perfectly clear with no wind.
(D) The UAVs to be painted in bright, easily recognizable colors.

96. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : Social media platforms are a double-edged sword in disaster communication.
Reason (R) : While they can be powerful tools for rapid information dissemination and crowdsourcing, they are also highly susceptible to the spread of misinformation and rumors.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.

Click Here to Buy book on Amazon

privacy laws.
(B) Censor user-generated content.
(C) Create a coffee-table book about the flood.
(D) Automatically and rapidly extract actionable information for situational awareness.

112. Read the following statements concerning the efficient deployment of ICT tools:
1. Deployment should always prioritize the most technologically advanced tool, irrespective of context.
2. Capacity building and training for end-users are essential for effective use.
3. Interoperability between different systems is a key goal.
4. Tools should be robust and resilient enough to function in degraded conditions.
5. ICT deployment is solely the responsibility of the national government, with no role for local agencies.

Which of the above statement(s) is/are correct?
(A) 1 and 5 only
(B) 2, 3, and 4 only
(C) 1, 2, and 3 only
(D) 3, 4, and 5 only

113. What is a primary objective of using Unmanned Aerial Vehicles (UAVs) in the immediate aftermath of a large-scale earthquake?
(A) To provide long-term housing solutions.
(B) To conduct rapid and safe visual assessment of damage to critical infrastructure like bridges and dams.
(C) To interview survivors for news reports.
(D) To manage the distribution of financial aid.

114. The "digital divide" poses a significant challenge to ICT-based disaster communication because:
(A) It ensures that everyone receives disaster information simultaneously.
(B) It can lead to the exclusion of vulnerable groups who lack access to or proficiency with modern technology.
(C) It means digital information is less reliable than printed information.
(D) It only affects people in highly developed urban centers.

115. Arrange the following steps in a logical sequence for using AI to analyze post-disaster imagery.
1. Deploy a UAV or satellite to capture images of the affected area.
2. Use the output to prioritize search and rescue or damage assessment efforts.
3. Process the images using a pre-trained machine learning model to detect features like damaged buildings.
4. Collect and label a large dataset of disaster imagery to train the model.

(A) 4, 1, 3, 2
(B) 1, 3, 2, 4
(C) 3, 4, 1, 2
(D) 4, 3, 1, 2

NODIA

116. A key benefit of using a centralized database management system for disaster relief is:
(A) It prevents any non-governmental organizations from participating in relief efforts.
(B) It helps avoid duplicate efforts and ensures aid is distributed more equitably.
(C) It makes the data less accessible to those who need it.
(D) It functions perfectly without electricity or internet connectivity.

117. Read the following statements carefully and choose the correct option.
Statement I : Social media is an officially sanctioned and fully reliable source for all disaster-related information.
Statement II : The use of social media by the public can help emergency managers identify and locate pockets of unmet needs.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

118. Which statement correctly identifies a limitation of a specific sensor type in a disaster context?
(A) GPS sensors are ineffective for tracking slow ground movement.
(B) Optical cameras on UAVs work perfectly in dense smoke or at night without special equipment.
(C) Acoustic sensors can be hampered by high levels of ambient noise in a chaotic post-disaster environment.
(D) Satellite imagery is always available in real-time with meter-level resolution for any point on Earth.

104. In the context of computing infrastructure for Disaster Risk Reduction (DRR), 'cloud computing' offers the advantage of:
(A) Being completely independent of internet connectivity.
(B) Being less secure than locally hosted servers.
(C) Storing data in the actual clouds in the sky.
(D) Providing on-demand, scalable computing resources without the need for large local server farms.

105. A government agency uses an AI model to predict wildfire spread based on weather data, topography, and vegetation type. This is an application of emerging technology for:
(A) Post-fire damage assessment.
(B) Proactive resource deployment and evacuation planning.
(C) Documenting the history of wildfires in the region.
(D) Training firefighters in basic first aid.

106. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : The deployment of sensor technologies for DRR is not a 'fire-and-forget' solution.
Reason (R) : Sensor systems require ongoing maintenance, calibration, and power management, and the data they produce needs continuous analysis and interpretation to be useful.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

107. Which statement best describes a limitation of using robotics in current search and rescue operations?
(A) Robots are more empathetic than human rescuers.
(B) Many current robots have difficulty navigating complex, unstructured, and unpredictable rubble.
(C) They can operate for an infinite duration without refueling or recharging.
(D) They can completely replace the need for human rescue teams.

108. Which is the most appropriate example of utilizing ICT for decision support in disaster mitigation?
(A) Using a mobile app to order food after an earthquake.
(B) Using simulation software to determine the potential impact of a new dyke on flood levels.
(C) Using a walkie-talkie to report a fire.
(D) Using a word processor to write a thank-you letter to volunteers.

NODIA

109. Match the social media action in List I with its corresponding disaster management function in List II and choose the correct option.
List I: (Action)
P. A person tweets "I am safe" using a specific hashtag.
Q. A user posts a picture of a collapsed bridge.
R. A fire department posts an evacuation map.
S. A volunteer group organizes a collection drive via a Facebook event.
List II: (Function)
1. Official communication
2. Community self-organization
3. Damage assessment/Situational awareness
4. Personal safety check-in
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-3, R-1, S-2
(C) P-2, Q-1, R-4, S-3
(D) P-4, Q-1, R-2, S-3

110. Which of the following is an incorrect statement regarding sensor technologies in Disaster Risk Reduction (DRR)?
(A) They can be used to monitor slow-onset disasters like drought.
(B) They can be used for rapid-onset disasters like earthquakes.
(C) The data from sensors is always self-explanatory and requires no expert interpretation.
(D) They form the basis of many early warning systems.

111. The use of machine learning to sort through and categorize photos and videos posted on social media during a flood is intended to:
(A) Identify individuals who are violating

(D) A is false but R is true.

82. Which of the following is an example of a "multimedia educational application" for disaster risk reduction?
(A) An interactive website with animations on family preparedness.
(B) A printed technical manual describing modern seismology.
(C) A verbal instruction given via a public address speaker.
(D) A legislative document outlining regional building codes.

83. What is the primary function of a database management system in the context of disaster management?
(A) To generate artificial intelligence.
(B) To fly drones over affected areas.
(C) To provide a structured way to store, retrieve, and manage large amounts of critical data.
(D) To physically carry messages between different locations.

84. Match the ICT tool in List I with the disaster management phase in List II where it is most effectively used and choose the correct option.
List I: (Tool)
P. Risk modeling software
Q. Mass notification system
R. Damage assessment apps
S. Debris management software
List II: (Phase)
1. Response
2. Recovery
3. Mitigation
4. Preparedness
(A) P-3, Q-4, R-1, S-2
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-3, R-2, S-1
(D) P-3, Q-1, R-4, S-2

85. Which of the following is a limitation of using Big Data in disaster management?
(A) The insights derived are always 100% accurate and free of bias.
(B) Big Data technologies are simple to implement and require no special expertise.
(C) The 'veracity' problem, where data can be inaccurate, incomplete, or deliberately misleading.
(D) The amount of data generated during a disaster is typically too small to be useful.

86. The concept of 'efficient use' of sensor technologies implies:
(A) Deploying the maximum number of sensors possible, regardless of cost or need.
(B) Using the collected data effectively to inform decisions and trigger actions.
(C) Keeping the collected data private and not sharing it with any other agency.
(D) Choosing sensors that are the most difficult to install and maintain.

87. Read the following statements regarding the valid practices for the design and deployment of sensor technologies for environmental risk monitoring:
1. Placing sensors in locations that are representative of the hazard being monitored.
2. Ensuring robust and redundant communication pathways for data transmission.
3. Ignoring the power requirements of the sensor network.
4. Developing a plan for data management, analysis, and system maintenance.
Which of the above statement(s) is/are correct?
(A) 1, 2, and 4 only
(B) 1 and 3 only
(C) 2, 3, and 4 only
(D) All of the above

88. What is the role of Artificial Intelligence in analyzing data from UAVs?
(A) To automatically identify and count features of interest, such as damaged homes or people needing rescue.
(B) To physically fly the UAV.
(C) To manufacture the batteries for the UAV.
(D) To manually draw maps based on the UAV footage.

89. A community leader is using a popular social media app to coordinate a neighborhood cleanup after a storm. This is an example of:
(A) The failure of official communication channels.
(B) A top-down command and control structure.
(C) The use of emerging technologies for

Downloaded from www.pdf.tube

119. The practice of designing a sensor network for monitoring river levels for flood warnings should primarily consider:
(A) The aesthetic appearance of the sensor stations.
(B) The proximity of the stations to the main disaster management office.
(C) The hydrological characteristics of the river basin.
(D) The color of the sensor casings.

120. In disaster risk management, the term "Big Data" refers to:
(A) A single, very large book about disasters.
(B) The use of large-font printing for warning signs.
(C) The main server at a disaster management agency.
(D) Complex datasets that require advanced computational processing techniques.

121. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : The introduction of ICT has transformed disaster management from a reactive to a more proactive process.
Reason (R) : Tools like GIS, remote sensing, and predictive modeling enable authorities to identify risks, plan mitigation strategies, and provide early warnings, rather than just reacting after an event.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

122. Which is the most appropriate reason for using robots in a decontamination zone after a chemical spill?
(A) Robots are immune to the effects of hazardous chemicals, unlike human workers.
(B) Robots can provide emotional support to victims.
(C) Robots are better at filling out regulatory paperwork.
(D) Robots require no power source and can work indefinitely.

123. The role of a computing infrastructure in supporting a UAV mission is to:
(A) Physically launch the UAV into the air.
(B) Provide a pilot's license to the operator.
(C) Store, process, and help analyze the large amounts of video and sensor data collected by the UAV.
(D) Manufacture the physical propeller blades.

124. Match the ICT approach in List I with its primary goal in disaster communication in List II and choose the correct option.
List I: (Approach)
P. Multimedia Education
Q. Social Media Monitoring
R. Decision Support System
S. Early Warning System
List II: (Goal)
1. To inform data-driven planning and mitigation
2. To build risk awareness in an accessible format
3. To provide timely alerts to enable protective action
4. To gain real-time situational awareness from the public
(A) P-1, Q-3, R-4, S-2
(B) P-2, Q-4, R-1, S-3
(C) P-3, Q-1, R-2, S-4
(D) P-2, Q-3, R-4, S-1

NODIA

125. All of the following are characteristics of Big Data in the context of Disaster Risk Reduction (DRR), often called the "Vs," EXCEPT:
(A) Volume (large amounts of data).
(B) Velocity (high speed of data generation).
(C) Variety (different types of data).
(D) Vanishing (data that disappears immediately after being created).

126. A key challenge in using machine learning models for disaster prediction is:
(A) The need for large amounts of high-quality, relevant historical data for training.
(B) The models are too simple to be useful.
(C) The models cannot be updated once they are created.
(D) The output is always in a language that no one can understand.

127. Read the following statements regarding ICT in disaster management:
1. ICT applications are only relevant for technologically advanced countries.
2. The effective use of ICT requires a socio-technical approach, considering users and context.
3. A major goal of ICT is to improve communication and coordination among response agencies.
4. ICT plays a role in all phases of the disaster management cycle.

Which of the above statement(s) is/are correct?
(A) 1 and 2 only
(B) 3 and 4 only
(C) 2, 3, and 4 only
(D) All of the above

128. An Emergency Operations Center (EOC) uses software that integrates live weather feeds, sensor data, and resource location information on a single map. This is an example of:
(A) A social media platform.
(B) A multimedia educational game.
(C) An ICT application for decision support.
(D) A robotics deployment system.

129. During a search and rescue operation in a large, forested area, which technology combination would be most effective?
(A) Ground-penetrating radar and social media analysis.
(B) A database of past floods and a public-address siren.
(C) UAVs with thermal cameras and GPS for rescuers.
(D) Robotics for underwater search and a weather balloon.

130. Arrange the data lifecycle stages within a 'Disaster Informatics' framework.
1. Data-driven decision making.
2. Data collection from various sources (sensors, social media, etc.).
3. Data analysis, integration, and visualization.
4. Long-term data archiving for research and learning.

(A) 2, 3, 1, 4
(B) 1, 2, 3, 4
(C) 4, 1, 2, 3
(D) 2, 1, 4, 3

131. The primary purpose of using ICTs in the 'mitigation' phase of disaster management is to:
(A) Support long-term risk reduction activities.
(B) Coordinate immediate search and rescue teams.
(C) Manage shelters for displaced persons.
(D) Document insurance claims after a disaster.

132. Read the following statements carefully and choose the correct option.
Statement I : The "efficient use" of a sensor system depends solely on the technical specifications of the sensor itself.
Statement II : The "efficient use" of a sensor system also involves the quality of its deployment, maintenance, and the integration of its data into decision-making processes.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

133. Which of the following is a key advantage of using Unmanned Aerial Vehicles (UAVs) compared to satellites for post-disaster assessment?
(A) UAVs can cover the entire globe in a single pass.
(B) UAVs can fly below cloud cover and provide higher-resolution imagery on demand.
(C) UAVs are not subject to any governmental regulations.
(D) UAV data is generally more expensive and slower to acquire.

134. A hospital's database system that is used to track patient intake, available beds, and medical supply inventory during a mass casualty event is a critical component of:
(A) Early warning systems.
(B) Long-term mitigation planning.
(C) Multimedia education.
(D) ICT for emergency operations.

135. The ethical use of Big Data from mobile phone locations for monitoring evacuation compliance must be balanced against:
(A) The need to make the data publicly available on the internet.
(B) The high cost of data analysis.
(C) The individual's right to privacy.
(D) The need to test the data on animals first.

Click Here to Buy book on Amazon

136. Read the following assertion and reason statements carefully and choose the correct option.

Assertion (A) : The deployment of sensor technologies for environmental risk monitoring has become a cornerstone of modern early warning systems.

Reason (R) : Sensors provide the real-time, ground-truth data (e.g., water levels, seismic motion) that is necessary to trigger timely and accurate warnings.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

137. Which statement accurately describes a current challenge for alerting technologies?
(A) It is too easy to send alerts.
(B) There are too many people who want to receive alerts.
(C) Ensuring message consistency and avoiding public confusion when alerts are issued through multiple systems.
(D) Alerts are not technologically advanced enough.

138. The use of AI to analyze patterns in historical seismic data to forecast the likelihood of aftershocks in a specific area is an example of:
(A) A social media monitoring tool.
(B) A Machine Learning application for prediction.
(C) A Decision Support System for mitigation.
(D) A robotic deployment for search and rescue.

139. Match the technology in List I with the potential limitation in a disaster context in List II and choose the correct option.

List I: (Technology)
P. UAV
Q. Social Media
R. Satellite Imagery
S. Ground Sensor Network

List II: (Limitation)
1. Can be obscured by cloud cover
2. Susceptible to rumors and misinformation
3. Limited by battery life and adverse weather
4. Can be destroyed by the hazard it is monitoring

(A) P-1, Q-2, R-4, S-3
(B) P-3, Q-2, R-1, S-4
(C) P-2, Q-4, R-3, S-1
(D) P-4, Q-1, R-2, S-3

140. Which of the following is the BEST example of a multimedia educational application for disaster risk reduction?
(A) A single-page flyer with bullet points.
(B) A scholarly article in a scientific journal.
(C) A government decree read aloud on the radio.
(D) An interactive mobile app that simulates safety steps through a game.

141. All of the following are examples of utilizing ICT for decision support in disaster mitigation, EXCEPT:
(A) Using GIS to identify areas unsuitable for construction due to landslide risk.
(B) Using cost-benefit analysis software to evaluate different retrofitting options for a hospital.
(C) Using a walkie-talkie to direct a fire truck to an incident.
(D) Using computer models to simulate the flood inundation from a dam break.

NODIA

142. Read the following statements regarding the use of robotics in disaster management:
1. Robots can be used for inspecting underwater infrastructure, like bridge supports, after a flood.
2. All disaster response robots are fully autonomous and require no human operator.
3. A major application is in Urban Search and Rescue (USAR) to explore voids in rubble.
4. Robots are primarily used for providing psychological first aid to survivors.
5. They can carry sensors into areas with hazardous gas concentrations.

Which of the above statement(s) is/are correct?
(A) 1, 3, and 5 only
(B) 2 and 4 only
(C) 1, 2, and 4 only
(D) 3 and 5 only

143. The primary benefit of "Disaster Informatics" is that it promotes:

(A) A fragmented, siloed approach to disaster data.
(B) An evidence-based, data-driven approach to managing the entire disaster lifecycle.
(C) A complete reliance on historical paper records.
(D) The exclusion of communities from disaster planning.

144. In the context of a changing media environment, disaster managers must be prepared to:
(A) Ignore all information coming from social media.
(B) Engage in two-way communication and actively monitor online conversations.
(C) Rely solely on government-controlled newspapers.
(D) Shut down the internet during a crisis to prevent panic.

145. Arrange the typical sequence of events in a social media-driven information response.
1. Official agencies confirm or debunk the information.
2. An event occurs and is witnessed by citizens.
3. Citizens post text, photos, or videos on social media.
4. The information spreads rapidly through sharing and retweeting.

(A) 2, 3, 4, 1
(B) 1, 2, 3, 4
(C) 4, 1, 2, 3
(D) 2, 1, 4, 3

146. A major design consideration for a sensor system intended for emergency and rescue operations is:
(A) That it should be large and difficult to move.
(B) That it should be highly complex and require weeks of training to use.
(C) That it should be portable, rugged, and quick to deploy.
(D) That it should only work in perfect weather conditions.

147. Read the following statements carefully and choose the correct option.
Statement I : UAVs are only useful for taking pictures and cannot carry any other sensors.
Statement II : UAVs can be equipped with various payloads, including thermal cameras, LiDAR, and gas sensors, to collect different types of data.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

148. Read the following statements regarding the key challenges or limitations associated with using sensor technologies in Disaster Risk Reduction (DRR):
1. The cost of deployment and maintenance can be high.
2. Data transmission can be disrupted during a disaster.
3. The vast amount of data generated can be difficult to manage and analyze (data deluge).
4. The sensors are always 100% accurate and never fail.

Which of the above statement(s) is/are correct?
(A) 1 and 2 only
(B) 1, 2, and 3 only
(C) 4 only
(D) All of the above

149. The efficient use of ICT for disaster communication is BEST demonstrated by:
(A) Sending a technical email to specialized government employees.
(B) Using multiple channels to send simple alerts to targeted groups.
(C) Waiting until a disaster ends to release verified official reports.
(D) Communicating exclusively with international news media agencies.

150. What is a primary role of Big Data analytics in the recovery phase of a disaster?
(A) To issue the initial evacuation warning.
(B) To analyze insurance claims, aid distribution patterns, and reconstruction progress to identify gaps and inefficiencies.
(C) To predict the exact time and location of the initial disaster event.
(D) To build the temporary shelters for displaced people.

151. Read the following assertion and reason statements carefully and choose the correct option.

Downloaded from www.pdf.tube

Assertion (A) : Artificial Intelligence can significantly speed up post-disaster damage assessment.

Reason (R) : AI algorithms, particularly from machine learning, can be trained to automatically analyze satellite or UAV imagery to identify features like collapsed buildings or flooded areas far faster than human analysts.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

152. Which of the following is NOT an application of sensor technologies in Disaster Risk Reduction (DRR)?
(A) Using accelerometers to monitor seismic activity for an earthquake early warning system.
(B) Using water level gauges in rivers for flood forecasting.
(C) Using public opinion polls to decide on a new national policy.
(D) Using GPS stations to measure ground deformation near a volcano.

153. One of the main goals of using social media in a disaster is for 'crowdsourcing'. What does this mean in this context?
(A) Forcing a large crowd of people to gather in one place.
(B) Outsourcing official government responsibilities to the crowd.
(C) Collecting information, such as damage reports or locations of people needing help, from a large group of people.
(D) Selling products to the crowd of survivors.

154. Match the ICT tool in List I with the type of data it primarily processes in List II and choose the correct option.
List I: (Tool)
P. GIS
Q. Social Media Analytics Tool
R. Remote Sensing Software
S. Sensor Data Logger
List II: (Data Type)
1. Time-series data from physical measurements (e.g., temperature, pressure)
2. Geospatial data (e.g., maps, coordinates, shapes)
3. Unstructured text, images, and network data
4. Raster and vector data from satellites or aircraft
(A) P-1, Q-2, R-3, S-4
(B) P-4, Q-1, R-2, S-3
(C) P-2, Q-3, R-4, S-1
(D) P-3, Q-4, R-1, S-2

155. Which statement best defines an ICT approach in disaster management?
(A) A specific brand of computer.
(B) The overarching strategy for how technology will be used to achieve disaster management objectives.
(C) A single piece of software.
(D) The act of repairing a broken radio.

NODIA

156. The use of ground-penetrating radar by a rescue robot is an application of:
(A) Sensor technology for emergency operations.
(B) Social media.
(C) Big data analytics.
(D) Multimedia education.

157. Read the following statements regarding the valid solutions for future challenges in alerting technologies:
1. Integrating cell broadcast, location-based SMS, and traditional sirens.
2. Developing standardized alert protocols like the Common Alerting Protocol (CAP) for interoperability.
3. Ignoring populations without smartphones.
4. Ensuring alerts are available in multiple languages and have accessibility features.
5. Making alerts more complex and technical.

Which of the above statement(s) is/are correct?
(A) 1, 2, and 4 only
(B) 3 and 5 only
(C) 1, 3, and 5 only
(D) 2 and 4 only

158. A key benefit of a well-managed database during a disaster is:
(A) It guarantees that no data will be lost, even if all hardware is destroyed.
(B) It provides a 'single source of truth', reducing

192. Read the following statements regarding ICT in disaster risk reduction:
1. ICT is a 'magic bullet' that solves all problems in disaster management.
2. The deployment of ICT tools must consider the local context, including infrastructure and skills.
3. ICT can enhance situational awareness by integrating information from multiple sources.
4. Social media represents both an opportunity for communication and a challenge due to misinformation.
5. The sole purpose of ICT in disasters is to send alerts.

Which of the above statement(s) is/are correct?
(A) 1 and 5 only
(B) 2, 3, and 4 only
(C) 1, 3, and 5 only
(D) All of the above

193. The primary goal of using sensor technologies for monitoring environmental risks is to:
(A) Gain data that can be used to understand the hazard and provide early warnings.
(B) Increase tourism to areas with environmental risks.
(C) Document the environment for historical archives.
(D) Test the durability of electronic components.

194. In a post-earthquake scenario, which technology would be most appropriate for quickly creating a detailed 3D map of a damaged urban area to plan for debris removal?
(A) Social media sentiment analysis.
(B) A network of ground-based seismic sensors.
(C) A UAV equipped with a LiDAR sensor.
(D) A mass SMS-based alerting system.

195. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : The use of social media during disasters can improve the efficiency of emergency response.
Reason (R) : Social media provides a platform for crowdsourcing real-time information about damages and needs, allowing response agencies to better allocate resources.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

196. The most significant limitation of sensor technologies is their:
(A) Inability to produce digital data.
(B) Reliance on physical infrastructure (power, communications) that can be compromised during a disaster.
(C) Inability to measure any useful physical parameters.
(D) Requirement to be operated manually by a person standing next to them.

197. Which of these is an example of an ICT application tool for disaster management?
(A) A sandbag.
(B) A first aid kit.
(C) A GIS software like QGIS or ArcGIS.
(D) A printed map from 20 years ago.

198. Match the ICT concept in List I with its definition in List II and choose the correct option.
List I: (Concept)
P. Big Data
Q. Machine Learning
R. Internet of Things (IoT)
S. Disaster Informatics
List II: (Definition)
1. An interdisciplinary field studying the application of information to all phases of a disaster.
2. A network of interconnected physical devices (including sensors) that collect and exchange data.
3. Extremely large data sets analyzed computationally to reveal patterns, trends, and associations.
4. An application of AI where systems automatically learn and improve from experience without being explicitly programmed.

(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-4, R-2, S-1
(C) P-2, Q-1, R-4, S-3
(D) P-4, Q-3, R-1, S-2

Click Here to Buy book on Amazon

(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

167. An incorrect pairing of a sensor type and its application is:
(A) Rain Gauge - Measuring precipitation for flood warnings.
(B) Accelerometer - Measuring ground shaking for earthquake warnings.
(C) Gas Sensor - Measuring air pressure for tsunami warnings.
(D) Infrared Camera - Detecting heat sources for wildfire mapping.

168. The "efficient deployment of ICT tools" focuses on:
(A) Ensuring the technology is appropriate for the context, problem, and users.
(B) Deploying as many different tools as possible.
(C) Using only the most expensive and complex technologies.
(D) Restricting technology use to headquarters staff only.

169. Match the emerging technology in List I with a key challenge associated with it in List II and choose the correct option.
List I: (Technology)
P. Artificial Intelligence
Q. Big Data
R. Social Media
S. Robotics
List II: (Challenge)
1. "Signal vs. Noise" problem
2. Algorithmic bias and transparency
3. Physical mobility in unstructured environments
4. Data privacy and ownership
(A) P-2, Q-4, R-1, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-3, R-2, S-1
(D) P-3, Q-1, R-4, S-2

170. Which of the following is NOT a primary use of sensor technologies in emergency and rescue operations?
(A) Using thermal cameras to find survivors in debris.
(B) Using acoustic sensors to listen for tapping or voices.
(C) Using chemical sensors to detect hazardous materials.
(D) Using social media to track celebrity gossip.

171. A major benefit of using Artificial Intelligence and Machine Learning in Disaster Risk Reduction (DRR) is their ability to:
(A) Replace human compassion and empathy.
(B) Identify complex patterns and correlations in data that are not apparent to humans.
(C) Operate without any data.
(D) Function without any need for electricity or computing power.

172. Read the following statements regarding ICT in disaster communication:
1. The rise of citizen journalism has no impact on disaster communication.
2. Official agencies can use ICT to rapidly disseminate warnings and instructions.
3. Rumor-tracking and misinformation correction are important ICT applications.
4. A one-way broadcast of information is the most efficient use of modern ICT.
5. ICT helps coordinate communication between different responding organizations.
Which of the above statement(s) is/are correct?
(A) 1 and 4 only
(B) 2, 3, and 5 only
(C) 1, 2, and 4 only
(D) 3, 4, and 5 only

173. What is a key design practice for a sensor network for environmental risk?
(A) Place all sensors at a single point for easy maintenance.
(B) Ensure the network has redundancy in both power and communication.
(C) Use sensors that are not sensitive to the hazard being monitored.
(D) Keep the data secret and do not use it for any warnings.

174. The use of a shared online portal where different NGOs and government agencies can update their relief activities to avoid duplication is an application of:
(A) Robotics.
(B) Sensor technology.

Downloaded from www.pdf.tube

confusion from conflicting reports.
(C) It automatically analyzes the data and makes decisions.
(D) It is only accessible by the highest-ranking official.

159. A rescue team is using a snake-like robot with a camera on its tip to search for victims in the rubble of a collapsed building. This is an example of using robotics for:
(A) Logistics and supply chain management.
(B) A task that is too dangerous and difficult for humans.
(C) Data analysis and predictive modeling.
(D) Public information and media relations.

160. Arrange the following in a logical order of technological evolution for remote disaster assessment.
1. High-resolution, on-demand UAV imagery.
2. Analysis of aerial photographs taken from manned aircraft.
3. Real-time satellite video feeds.
4. Initial reports from telegraphs and radio operators.

(A) 4, 2, 3, 1
(B) 1, 2, 3, 4
(C) 2, 4, 1, 3
(D) 4, 3, 2, 1

161. An ICT tool that analyzes various factors like building codes, soil type, and proximity to a fault line to generate a seismic risk score for a neighborhood is best described as a:
(A) Decision Support System for mitigation.
(B) Social media platform.
(C) Search and rescue robot.
(D) Mass alert notification system.

162. Read the following statements carefully and choose the correct option.
Statement I : Big Data analytics in disaster management is solely concerned with processing data from social media.
Statement II : Big Data analytics can integrate and analyze diverse datasets, including sensor data, satellite imagery, social media, and logistical information.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

163. Read the following statements regarding the benefits of using sensor technologies for monitoring environmental risks:
1. They can operate in hazardous locations without risking human lives.
2. They provide objective and quantifiable data.
3. They allow for continuous, 24/7 monitoring.
4. They are completely invulnerable to damage and require no maintenance.

Which of the above statement(s) is/are correct?
(A) 1 and 4 only
(B) 2 and 3 only
(C) 1, 2, and 3 only
(D) All of the above

NODIA

164. What is a primary limitation of using social media as a source of information during a disaster?
(A) The information is often too well-structured.
(B) The volume of information is too small to be useful.
(C) The high potential for deliberate misinformation and unverified rumors.
(D) It can only be accessed using desktop computers.

165. The term 'computing infrastructure' in Disaster Risk Reduction (DRR) refers to the foundational systems that support other technologies. Which is the best analogy?
(A) It is like the roads and electrical grid of a city.
(B) It is like the individual bricks of a house.
(C) It is like a single car on the road.
(D) It is like the driver of the car.

166. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : UAVs are increasingly used for delivering critical supplies in disaster-stricken areas.
Reason (R) : UAVs can bypass damaged or blocked roads to deliver small, high-value items like medicine or communication devices to isolated communities.
(A) Both A and R are true and R is the correct explanation of A.

humans.

183. The efficient use of ICT for disaster communication depends heavily on:
(A) The complexity and technicality of the message.
(B) The audience's ability to receive, understand, and act upon the information.
(C) Using a single communication channel to avoid confusion.
(D) Communicating only after the situation is fully resolved.

184. Match the sensor application in List I with the sensor type in List II and choose the correct option.
List I: (Sensor Application)
P. Monitoring structural integrity of a dam
Q. Detecting precursors to a volcanic eruption
R. Providing early warning for a flash flood
S. Locating survivors in a collapsed building
List II: (Sensor Type)
1. Tiltmeters and gas sensors
2. Strain gauges and accelerometers
3. Acoustic and thermal sensors
4. Water level sensors and rain gauges
(A) P-1, Q-2, R-3, S-4
(B) P-2, Q-1, R-4, S-3
(C) P-3, Q-4, R-1, S-2
(D) P-4, Q-3, R-2, S-1

185. The term 'Disaster Informatics' encompasses:
(A) The use of ICT exclusively for post-disaster data collection.
(B) The entire information flow, from data acquisition to decision making, across all disaster phases.
(C) A specific software for drawing maps.
(D) The history of communication technologies.

186. All of the following are challenges associated with using Big Data in Disaster Risk Reduction (DRR), EXCEPT:
(A) Data privacy issues.
(B) The need for powerful computing infrastructure.
(C) The small and manageable volume of the data.
(D) The difficulty in verifying the accuracy of data from diverse sources.

187. Which of the following represents a correct cause-and-effect relationship in disaster ICT?
(A) Cause: Deployment of UAVs; Effect: Increased cloud cover.
(B) Spread of misinformation on social media; Effect: Hampered and confused response efforts.
(C) Cause: Use of robust database management; Effect: Increased duplication of relief efforts.
(D) Cause: Installation of seismic sensors; Effect: Prevention of earthquakes.

188. A key component of the "computing infrastructure" for a large-scale sensor network is:
(A) The individual sensor casing.
(B) The central server and database for data storage and processing.
(C) The pole on which a sensor is mounted.
(D) The instruction manual for the sensor.

189. A machine learning model is trained to listen to audio streams from a disaster zone and identify the sound of a human scream. This is an application of AI in:
(A) Mitigation.
(B) Preparedness.
(C) Response and rescue.
(D) Recovery.

190. An ICT application for decision support in disaster mitigation would most likely be used by:
(A) A first responder at the scene of an accident.
(B) A city planner or a risk manager.
(C) A news reporter covering the story.
(D) A person seeking shelter.

191. Which of the following correctly pairs an emerging technology with its primary function in disaster management?
(A) Big Data - Manually writing down names in a logbook.
(B) UAV - Providing close-up, high-resolution aerial imagery of a disaster zone.
(C) Artificial Intelligence - Physically building sandbag walls.
(D) Robotics - Designing social media awareness campaigns.

Click Here to Buy book on Amazon

(D) A robotic search and rescue tool.

223. What is the key advantage of using AI to analyze social media posts during a flood?
(A) AI can physically rescue people who are tweeting for help.
(B) AI can process and categorize millions of posts in real-time, which is impossible for humans.
(C) AI ensures that every post on social media is 100% accurate.
(D) AI can increase the battery life of the users' phones.

224. Match the ICT term in List I with its example application in List II and choose the correct option.
List I: (Term)
P. Robotics
Q. Machine Learning
R. Big Data Analytics
S. Sensor Technology
List II: (Application)
1. Using GPS receivers to monitor tectonic plate movement.
2. A snake-like robot inspects voids in a collapsed building.
3. Analyzing call detail records from a telecom company to map population displacement.
4. A model that predicts flood risk based on training with historical rainfall and river level data.
(A) P-1, Q-2, R-3, S-4
(B) P-3, Q-1, R-4, S-2
(C) P-2, Q-4, R-3, S-1
(D) P-4, Q-3, R-1, S-2

225. Which of the following is a primary challenge in the efficient deployment of ICT tools in many developing regions?
(A) The population is too well-trained in using technology.
(B) The lack of reliable power supply and internet connectivity.
(C) The technology is too simple and not advanced enough.
(D) Government regulations are too relaxed.

226. What is the MOST appropriate application of a Decision Support System (DSS) in disaster management?
(A) To automatically dispatch emergency vehicles without human intervention.
(B) To provide decision-makers with analyzed information and scenario modeling to aid their judgment.
(C) To create a video game about disasters for public entertainment.
(D) To replace all forms of communication between responders.

227. Read the following statements regarding emerging technologies in Disaster Risk Reduction (DRR):
1. UAVs can provide rapid aerial reconnaissance of disaster-stricken areas.
2. AI can be used to predict the path of a wildfire.
3. Social media can be a source of real-time situational awareness.
4. Robotics can be used for search and rescue in hazardous environments.
Which of the above statement(s) is/are correct?
(A) 1 and 2 only
(B) 3 and 4 only
(C) 1, 2, and 3 only
(D) All of the above

228. The main benefit of using sensor technologies for monitoring environmental risks, such as landslides, is:
(A) The ability to provide early warning based on the detection of precursor phenomena like ground movement.
(B) The ability to physically prevent the landslide from occurring.
(C) The aesthetic value the sensors add to the landscape.
(D) The ability to communicate with the landslide.

229. A rescue worker in a confined space wears a device that monitors their heart rate, body temperature, and exposure to toxic gases, transmitting this data back to a command post. This is a use of:
(A) Sensor technology for responder safety.
(B) Big Data.
(C) Social Media.
(D) A multimedia educational application.

NODIA

199. Efficient deployment of ICT tools in a resource-constrained environment should prioritize:
(A) The most complex and feature-rich tools.
(B) Open-source, robust, and easy-to-use tools with strong community support.
(C) Proprietary tools that require expensive annual licenses.
(D) Tools that require a permanent high-speed internet connection to function.

200. What is the fundamental difference between a simple sensor and a sensor system for Disaster Risk Reduction (DRR)?
(A) There is no difference.
(B) A sensor system includes not just the sensor but also the power supply, data transmission, and data processing components.
(C) A simple sensor is analog, while a sensor system is always digital.
(D) A sensor system can only be used by governments.

201. Which of the following is NOT a benefit of using UAVs in disaster response?
(A) Rapid deployment for initial damage assessment.
(B) Access to inaccessible or dangerous areas.
(C) Ability to operate in all weather conditions, including hurricanes and blizzards.
(D) Creation of high-resolution maps and 3D models.

202. Read the following statements carefully and choose the correct option.
Statement I : ICT is primarily useful during the response phase, with little application in mitigation or preparedness.
Statement II : Effective ICT integration involves a socio-technical system, including technology, people, processes, and policies.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

203. Read the following statements regarding the practices that enhance the efficient use of sensor technologies for Disaster Risk Reduction (DRR):
1. Neglecting to calibrate the sensors after installation.
2. Establishing clear protocols for what actions to take when sensor data crosses a critical threshold.
3. Storing the data on a local computer with no backup or network connection.
4. Integrating the sensor data feed into a common operational picture or decision support system.

Which of the above statement(s) is/are correct?
(A) 1 and 3 only
(B) 2 and 4 only
(C) 1, 2, and 3 only
(D) 2, 3, and 4 only

204. The analysis of massive, anonymized mobile phone location data to understand population movements during an evacuation is an application of:
(A) Robotics.
(B) Multimedia education.
(C) Big Data.
(D) Small-scale sensor deployment.

205. The primary purpose of using robotics in a collapsed mine is to:
(A) Perform tasks like atmospheric testing and visual search without risking human lives.
(B) Provide entertainment for the waiting families.
(C) Interview the miners for a news story.
(D) Manage the logistics of the rescue camp.

206. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : The management of data is a critical component of modern disaster risk management.
Reason (R) : Without effective database management, the large volumes of data collected from sensors, UAVs, and social media would be chaotic and unusable for decision-making.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

207. Which of the following is an INCORRECT statement about social media in disasters?
(A) It can be used by authorities to disseminate

Downloaded from www.pdf.tube

(C) A multimedia educational tool.
(D) ICT for coordination and decision support.

175. Put the following communication technologies in the correct chronological order of their invention/widespread use.
1. Internet-based social media
2. Electric telegraph
3. Broadcast radio
4. Geostationary communication satellite

(A) 2, 3, 4, 1
(B) 1, 4, 3, 2
(C) 3, 2, 1, 4
(D) 2, 4, 3, 1

176. What is a primary limitation of UAVs in disaster management?
(A) They provide imagery that is too high in resolution.
(B) They are constrained by factors like battery life, payload capacity, and weather conditions.
(C) They can only be used for military purposes.
(D) They are too slow to be of any use in a rapid-onset disaster.

177. Read the following statements carefully and choose the correct option.
Statement I : A good database management practice in Disaster Risk Reduction (DRR) is to store all data in a single, unchangeable text file.
Statement II : A structured database management system allows for efficient querying, updating, and ensuring the integrity of critical disaster-related data.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

178. Read the following statements regarding practical applications of sensor technologies for emergency and rescue operations:
1. Using video and acoustic sensors on robots to search voids in rubble.
2. Wearing bio-sensors that monitor the vital signs of first responders in hazardous environments.
3. Using air quality sensors to ensure an area is safe to enter after a chemical spill.
4. Using social media to send personal messages to friends.

Which of the above statement(s) is/are correct?
(A) 1 and 2 only
(B) 3 and 4 only
(C) 1, 2, and 3 only
(D) All of the above

179. A city's planning department uses a software tool that models how different land-use policies would affect the city's vulnerability to future flooding. This tool is a form of:
(A) Social media.
(B) Decision Support System.
(C) Early Warning System.
(D) Robotic technology.

180. The most significant contribution of social media to disaster response is its ability to:
(A) Guarantee the privacy of all users.
(B) Provide a platform for real-time, ground-level information sharing from the affected population.
(C) Replace the need for trained emergency personnel.
(D) Function without an internet connection.

181. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : The effective use of ICT in disaster management requires more than just acquiring technology.
Reason (R) : It necessitates a holistic approach that includes policy, institutional frameworks, standard operating procedures, and continuous capacity building for personnel.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

182. A major benefit of using robots for inspection in hazardous environments (e.g., a damaged nuclear facility) is that they:
(A) Can write a detailed report on their findings.
(B) Prevent human exposure to lethal risks like radiation.
(C) Can repair the nuclear reactor automatically.
(D) Are more creative in finding solutions than

NODIA

appeal.

215. Put the following in a logical sequence representing the flow of information in an ICT-enabled disaster response.
1. Data analysis and visualization on a dashboard in the EOC.
2. A field worker uses a mobile app to submit a damage report with photos and GPS coordinates.
3. A decision-maker allocates resources based on the consolidated information.
4. The data is transmitted over a mobile network to a central database.

(A) 2, 4, 1, 3
(B) 1, 2, 3, 4
(C) 3, 1, 2, 4
(D) 2, 1, 4, 3

216. A primary benefit of a robust computing infrastructure for Disaster Risk Reduction (DRR) is that it:
(A) Eliminates the need for human decision-makers.
(B) Provides the processing power and storage needed to handle large-scale data from sensors, models, and other sources.
(C) Functions without any source of electricity.
(D) Is completely secure from all forms of cyber-attack.

217. Read the following statements carefully and choose the correct option.
Statement I : Social media platforms are purely a source of misinformation and should be ignored by emergency managers.
Statement II : Social media can be a valuable tool for situational awareness if the information is carefully filtered and verified.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

218. Which statement best describes the role of Machine Learning in Disaster Risk Reduction (DRR)?
(A) An application of AI where models learn patterns from data without being explicitly programmed for a task.
(B) A manual procedure for inputting localized disaster relief information into agency spreadsheets.
(C) The physical design and assembly of robotic systems used for hazardous search missions.
(D) A type of social media platform used primarily for real-time situational awareness and reporting.

219. Which of the following is NOT a limitation of sensor systems in disaster management?
(A) Susceptibility to damage from the hazard event.
(B) The need for power and communication links.
(C) The potential for generating false alarms.
(D) The ability to provide objective, quantitative data.

220. The primary use of UAVs in the preparedness phase of disaster management would be:
(A) To deliver emergency supplies.
(B) To conduct detailed mapping of high-risk areas to support evacuation planning.
(C) To search for missing persons.
(D) To assess damage to buildings after an event.

221. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : The 'changing media environment' requires disaster management agencies to be more proactive and engaged in their communication strategies.
Reason (R) : In an environment with social media and 24-hour news cycles, if official sources do not provide timely and accurate information, an information vacuum is created that will be filled by rumors and speculation.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

222. An ICT solution designed to alert residents of a specific neighborhood about a nearby gas leak would be an example of:
(A) A targeted alerting technology.
(B) A multimedia educational application.
(C) A big data analytics platform.

Click Here to Buy book on Amazon

official information.
(B) It allows for two-way communication between the public and officials.
(C) All information found on social media during a crisis is verified and accurate.
(D) It can help friends and family members check on each other's safety.

208. A key element of a successful "design and deployment practice" for sensor technologies is:
(A) To conduct a thorough needs assessment and site survey before deployment.
(B) To choose the cheapest available sensor regardless of its suitability.
(C) To deploy the sensors without a plan for how the data will be used.
(D) To ensure the system is proprietary and cannot be integrated with other systems.

209. Match the technology in List I with the phase of the disaster management cycle where it has the most prominent application in List II and choose the correct option.
List I: (Technology)
P. Predictive modeling of climate change impacts
Q. Real-time tracking of first responder units
R. Social media platforms for fundraising and volunteer management
S. Mass notification systems for evacuation orders
List II: (Phase)
1. Response
2. Recovery
3. Preparedness
4. Mitigation
(A) P-4, Q-1, R-2, S-3
(B) P-1, Q-2, R-3, S-4
(C) P-4, Q-3, R-2, S-1
(D) P-3, Q-4, R-1, S-2

210. The greatest challenge posed by the "changing media environment" for disaster managers is:
(A) The need to manage a rapid, high-volume, multi-directional flow of information.
(B) The decreasing cost of communication hardware.
(C) The decline of traditional newspapers.
(D) The difficulty in finding a working radio.

211. Which of the following is an exception to the typical applications of Artificial Intelligence in Disaster Risk Reduction (DRR)?
(A) Analyzing satellite imagery to identify landslides.
(B) Predicting cyclone intensity using meteorological data.
(C) Optimizing traffic flow during a city-wide evacuation.
(D) Manually filling sandbags to build a levee.

212. Read the following statements regarding ICT applications, tools, and techniques for disaster management:
1. Mobile applications can be used for damage assessment reporting from the field.
2. GIS is a fundamental tool for visualizing spatial risk data.
3. Amateur radio (Ham radio) is an obsolete technique with no modern application.
4. Satellite phones provide a resilient communication option when terrestrial networks fail.
5. A single ICT tool is sufficient for managing all types of disasters.
Which of the above statement(s) is/are correct?
(A) 1, 2, and 4 only
(B) 3 and 5 only
(C) 1, 3, and 5 only
(D) 2 and 4 only

213. Using a computer model to simulate the potential economic losses from an earthquake to help decide on budget allocation for seismic retrofitting is an example of:
(A) A multimedia educational game.
(B) A social media crisis communication plan.
(C) An ICT application for decision support in mitigation.
(D) An ICT application for immediate response.

NODIA

214. The term "efficient use" of sensor technologies in Disaster Risk Reduction (DRR) primarily means:
(A) Using the data generated by the sensors to make timely and effective decisions.
(B) Deploying the greatest number of sensors, regardless of their relevance.
(C) Keeping the sensor data confidential from all stakeholders.
(D) Selecting sensors based on their aesthetic

230. A key consideration in the "Design and Deployment practices" for sensor systems is ensuring:
(A) The data is collected but never analyzed.
(B) The system is scalable and can be expanded if needed.
(C) The system is isolated and cannot connect to any other network.
(D) The sensors are fragile and easily damaged.

231. The primary function of a database management system in the context of registering displaced persons is to:
(A) Provide them with internet access.
(B) Ensure each person is registered once and their needs are tracked efficiently.
(C) Fly a drone over the shelter to count them.
(D) Automatically translate their native language.

232. Read the following statements carefully and choose the correct option.
Statement I : The sole purpose of a multimedia educational application for risk reduction is to entertain children.
Statement II : Effective multimedia educational applications use a combination of text, images, and interactivity to convey important risk reduction messages to a wide audience.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

233. Which of the following is a limitation of using AI in disaster management?
(A) AI models are always perfectly objective and free from bias.
(B) The performance of an AI model is heavily dependent on the quality and quantity of the data it was trained on.
(C) AI systems require no electricity or computing power.
(D) AI can function with complete certainty and never makes a probabilistic judgment.

234. An example of the "efficient use of ICT for disaster communication" is:
(A) Releasing a 500-page technical report during the height of a crisis.
(B) Sending clear, actionable, and geographically targeted alerts via mobile phones.
(C) Communicating only through formal, written letters delivered by post.
(D) Broadcasting conflicting information on different channels.

235. What is the role of the underlying "computing infrastructure" when using Big Data analytics?
(A) To provide a physical building to store paper records.
(B) To provide the powerful servers and storage systems needed to process massive datasets.
(C) To design the user interface of a social media app.
(D) To write the text of an alert message.

NODIA

236. Read the following assertion and reason statements carefully and choose the correct option.
Assertion (A) : The use of Robotics in urban search and rescue is still a developing field with significant challenges.
Reason (R) : The unstructured and highly unpredictable nature of a collapsed building environment poses major mobility and navigation challenges for current-generation robots.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

237. The "Internet of Things" (IoT) contributes to Disaster Risk Reduction (DRR) primarily by:
(A) Allowing people to communicate better on social media.
(B) Dramatically increasing the number and types of internet-connected sensors providing real-time data.
(C) Providing a platform for online gaming.
(D) Securing financial transactions.

238. Which of the following is an INCORRECT pairing of an ICT tool and its function?
(A) GIS - Spatial analysis of vulnerability.
(B) UAV - Rapid aerial damage assessment.
(C) Social Media - Dissemination of rumors and verified information.
(D) Robotics - Providing long-term shelter and

(A) a broadcasting model to an interactive and participatory model.
(B) a participatory model to a broadcasting model.
(C) a multi-channel approach to a single-channel approach.
(D) a focus on the internet to a focus on satellite communications.

253. Based on the text, what can be inferred about the effectiveness of a single technology in disaster communication?
(A) A single, powerful technology is sufficient if deployed correctly.
(B) Satellite communication is the single most reliable technology.
(C) A single technology is inadequate for reaching all segments of a population.
(D) The internet has rendered all other single technologies obsolete.

254. A disaster management authority plans to implement a new communication strategy. Based on the principles outlined in the paragraph, which of the following plans would be most effective?
(A) A plan that relies solely on a new, advanced mobile application for all communication.
(B) A plan that replaces the existing GIS system with a more advanced satellite imaging service.
(C) A plan that prioritizes communication between response agencies over communication with the public.
(D) A plan that integrates radio broadcasts, SMS alerts, social media updates, and satellite phones.

255. What does the paragraph identify as a key challenge in leveraging ICT for disaster management?
(A) The high cost of implementing new ICT tools.
(B) The public's resistance to adopting new technologies.
(C) Creating a resilient and interoperable communication infrastructure.
(D) The lack of available ICT platforms for disaster scenarios.

Direction : Please read the following source carefully.

The field of Disaster Informatics has emerged as a critical sub-discipline, focusing on the specialized application of information science and technology to manage the complexities of disaster-related data. A key component of this field is the development and use of multimedia educational applications for risk reduction. These applications are designed to transcend traditional awareness campaigns by offering interactive, engaging, and accessible learning experiences. By utilizing multimedia—incorporating text, graphics, audio, video, and animation—these educational tools can effectively communicate complex risk information to diverse audiences, including children, an-literate populations, and individuals with different learning preferences. For example, a multimedia application might use simulations to demonstrate the impact of an earthquake on different building types or an interactive game to teach evacuation routes. The primary objective is to enhance risk perception and promote proactive, risk-reducing behaviors within communities. Such applications contribute significantly to the mitigation and preparedness phases of the disaster management cycle by empowering individuals with the knowledge and skills needed to protect themselves and their communities. The effective design of these tools requires a deep understanding of both the local hazard context and the socio-cultural characteristics of the target audience to ensure the information is not only received but also understood and acted upon.

Based on the above source, attempt the following five questions.

256. What is the primary focus of the field of Disaster Informatics as described in the paragraph?
(A) The exclusive development of hardware for disaster response.
(B) The application of information science to manage disaster-related data.
(C) The financial management of disaster relief funds.
(D) The physical logistics of deploying rescue teams.

257. Multimedia educational applications are highlighted as being particularly effective for risk reduction because they:
(A) are cheaper to produce than traditional

Downloaded from www.pdf.tube

failure, allowing for preventative maintenance or closure.
(C) It increases the traffic capacity of the bridge.
(D) It automatically repaints the bridge when needed.

247. Read the following statements carefully and choose the correct option.
Statement I : The 'digital divide' is no longer a concern for disaster communication as everyone now owns a smartphone.
Statement II : Future solutions for alerting technologies must consider methods to reach people without reliable internet or mobile phone access.
(A) Both Statement I and Statement II are true.
(B) Both Statement I and Statement II are false.
(C) Statement I is true, but Statement II is false.
(D) Statement I is false, but Statement II is true.

248. The role of AI/Machine Learning in analyzing Big Data from a disaster is to:
(A) Manually read through all collected disaster-related datasets.
(B) Identify patterns and anomalies within complex data streams.
(C) Physically store data on external hard drives for archiving.
(D) Create additional data to increase the existing data volume.

249. A key limitation for many ground-based robots in a search and rescue scenario is:
(A) Their inability to carry sensors.
(B) Their difficulty in moving over and through unstructured rubble.
(C) Their refusal to enter dark spaces.
(D) The fact that they are too large to fit in any buildings.

250. The ultimate objective of utilizing the various ICT tools and emerging technologies in disaster risk management is to:
(A) Reduce the loss of life, and minimize the social and economic impact of disasters.
(B) Spend the entire disaster management budget on technology.
(C) Create jobs for IT professionals.
(D) Test the latest gadgets in a real-world environment.

Direction : Please read the following source carefully.

Information and Communications Technology (ICT) has fundamentally reshaped the landscape of disaster management, transitioning from traditional, often slower, communication methods to dynamic, real-time systems. The core of this transformation lies in the application of diverse ICT approaches that cater to all phases of the disaster cycle. In the contemporary changing media environment, the efficient use of ICT for disaster communication is paramount. This involves not just the adoption of new tools, but a strategic integration of various platforms, from satellite communications and geographic information systems (GIS) to mobile networks and the internet. The goal is to ensure the timely and accurate dissemination of information to and from affected populations and response agencies. This shift necessitates a move beyond simple information broadcasting to a more interactive and participatory communication model. Effective disaster communication now leverages a multi-channel approach, recognizing that no single technology can reach everyone. The challenge is to create a resilient and interoperable communication infrastructure that can withstand the impacts of a disaster and facilitate a coordinated and efficient response, thereby enhancing overall disaster resilience. The efficient use of ICT is thus not merely a technical consideration but a strategic imperative for modern disaster risk management.

Based on the above source, attempt the following five questions.

251. According to the paragraph, what is the primary goal of efficiently using ICT for disaster communication?
(A) To replace all traditional communication methods with modern ones.
(B) To ensure the timely and accurate dissemination of information.
(C) To focus exclusively on broadcasting information from authorities.
(D) To reduce the operational costs of disaster management agencies.

252. The paragraph suggests that the changing media environment necessitates a shift in disaster communication from:

NODIA

285. The paragraph infers that the overall effectiveness of a sensor-based system for emergency response is a result of:
(A) the number of sensors deployed, regardless of their type or location.
(B) the brand and model of the computing hardware used.
(C) the successful integration of sensor deployment, data transmission, and rapid data processing.
(D) the speed at which a single sensor can transmit one piece of data.

Direction : Please read the following source carefully.

The advent of Big Data has introduced a paradigm shift in disaster risk management, enabling the analysis of vast, complex, and rapidly generated datasets that were previously unmanageable. Big Data in this context refers to information from myriad sources, including satellite imagery, sensor networks, social media feeds, and government databases. The effective use of this data hinges on advanced database management systems capable of handling the volume, velocity, and variety of the information. Machine Learning, a subset of artificial intelligence, provides the analytical power to sift through this Big Data and uncover hidden patterns, correlations, and predictive insights. For instance, machine learning algorithms can be trained on historical weather data and real-time sensor readings to improve the accuracy of cyclone track forecasting. Similarly, by analyzing post-disaster aerial imagery, machine learning models can automatically identify and classify damaged buildings, providing a rapid damage assessment that would take humans days or weeks to complete. This fusion of Big Data and Machine Learning enhances situational awareness, optimizes resource allocation for response efforts, and contributes to more accurate risk modeling for long-term mitigation planning. The challenge lies in developing the computational infrastructure and the human expertise required to manage and interpret these complex systems effectively.

Based on the above source, attempt the following five questions.

286. According to the paragraph, what is the primary role of Machine Learning in managing Big Data for disasters?
(A) To generate the initial raw data from sensor networks.
(B) To store the vast quantities of data in an organized manner.
(C) To physically deploy data collection devices in the field.
(D) To analyze data to find patterns and generate predictive insights.

287. The paragraph mentions that advanced database management is a prerequisite for using Big Data. Why is this the case?
(A) Advanced databases are required to encrypt all incoming social media data.
(B) Only advanced databases can be managed by non-technical personnel.
(C) Traditional databases cannot handle the volume, velocity, and variety of disaster-related data.
(D) Traditional databases are incompatible with satellite imagery.

288. Based on the text, what can be inferred about the relationship between Big Data and traditional disaster management approaches?
(A) Big Data has completely replaced the need for human decision-makers.
(B) Big Data provides a level of analytical depth and speed previously unattainable.
(C) Traditional approaches are more reliable as they do not depend on technology.
(D) Big Data is only useful for the recovery phase, unlike traditional methods.

289. A disaster response agency needs to quickly assess the extent of damage across a large, flooded region. Applying the concepts from the paragraph, which of the following would be the most efficient method?
(A) Sending teams of surveyors to every street, a process that could take weeks.
(B) Waiting for individual damage reports to be phoned in by residents.
(C) Reviewing historical flood maps from previous decades to estimate the damage.
(D) Using a machine learning model to analyze post-flood satellite and drone imagery to classify damaged areas.

Click Here to Buy book on Amazon

printed materials.
(B) require minimal technical expertise from the end-user.
(C) can function without an internet connection in all scenarios.
(D) offer interactive and engaging learning experiences for diverse audiences.

258. Based on the text, one can infer that the success of a multimedia educational application for risk reduction is highly dependent on:
(A) its contextual relevance to the target audience and local hazards.
(B) its ability to generate revenue for disaster agencies.
(C) the complexity of the animations and graphics used.
(D) its compatibility with the latest smartphone models.

259. An organization is tasked with creating a cyclone awareness program for a coastal community with varying literacy levels. According to the paragraph, which approach would be most suitable?
(A) Distributing text-heavy informational pamphlets.
(B) Conducting a series of university-level lectures on meteorology.
(C) Developing an interactive application with visual simulations of storm surge and audio instructions.
(D) Broadcasting a single, lengthy radio documentary on the history of cyclones.

260. Which phase of the disaster management cycle is most directly supported by the use of multimedia educational applications as described in the text?
(A) Mitigation and Preparedness.
(B) Response and Recovery.
(C) Recovery and Reconstruction.
(D) Response and Relief.

Direction : Please read the following source carefully.

The current state of alerting technologies for disaster management reflects a significant evolution from simple sirens to sophisticated, multi-platform systems. However, persistent challenges remain, necessitating innovative solutions for the future. A primary challenge is ensuring reach and reliability, often termed the 'last-mile connectivity' problem, where alerts fail to reach the most vulnerable or remote populations. Future solutions must address this by integrating multiple communication channels, such as Common Alerting Protocol (CAP)-enabled systems that can push alerts simultaneously via mobile networks (Cell Broadcast), public radio/television (Emergency Alert System), social media, and dedicated satellite services. Another challenge is the clarity and actionability of the alert message itself. An alert that causes panic or confusion is counterproductive. Therefore, future developments are focused on creating message content that is clear, concise, culturally appropriate, and provides specific, actionable instructions. Furthermore, the rising threat of cyber-attacks on communication infrastructure poses a significant risk to the integrity of alerting systems. Consequently, future solutions must incorporate robust cybersecurity measures to prevent spoofing or disruption of alerts. The goal is to build a resilient, secure, and people-centric alerting ecosystem that not only warns but also effectively guides public response, thereby minimizing loss of life and property.

Based on the above source, attempt the following five questions.

261. According to the paragraph, what is the 'last-mile connectivity' problem in the context of alerting technologies?
(A) The technical difficulty of composing an alert message.
(B) The delay between detecting a hazard and issuing an alert.
(C) The high cost associated with maintaining alert sirens.
(D) The failure of alerts to reach vulnerable and remote populations.

262. The paragraph suggests that a key focus for future alerting technologies, beyond just technical delivery, should be on the:
(A) financial cost of the alert message.
(B) clarity, conciseness, and actionability of the message content.
(C) length and technical detail of the message.
(D) entertainment value of the alert format.

NODIA

263. What can be inferred from the text about the Common Alerting Protocol (CAP)?
(A) It is an outdated technology being replaced by social media alerts.
(B) It is a system that works exclusively with mobile cell broadcasts.
(C) It is a standard designed to facilitate the dissemination of alerts across multiple platforms.
(D) It is primarily concerned with the cybersecurity aspect of alerts.

264. A government agency is designing a new national disaster alert system. Based on the challenges mentioned in the paragraph, which feature should be prioritized to enhance the system's effectiveness?
(A) A single, high-volume siren system for all urban areas.
(B) An alert message format that uses highly technical jargon for precision.
(C) A system that sends alerts only to registered smartphones to avoid public panic.
(D) Robust encryption and security protocols to prevent unauthorized access and false alerts.

265. What is the ultimate objective of the future solutions for alerting technologies described in the paragraph?
(A) To build a resilient, secure, and people-centric alerting ecosystem.
(B) To create a single, universally adopted alerting application.
(C) To replace human decision-making with fully automated systems.
(D) To ensure all alerts are monetized through private sector partnerships.

Direction : Please read the following source carefully.

The efficient deployment of ICT tools and the utilization of ICT applications for decision support are critical for effective disaster mitigation. It is not sufficient to merely possess advanced technologies; a strategic approach to their deployment is essential for maximizing their impact. Efficient deployment involves considerations such as interoperability between different systems, scalability to handle massive data loads during a crisis, and the training of personnel to use the tools effectively. For instance, deploying a geographic information system (GIS) is only useful if it is populated with accurate, up-to-date data and if decision-makers are trained to interpret its outputs. Furthermore, ICT applications are increasingly pivotal in creating sophisticated Decision Support Systems (DSS) for disaster mitigation. These systems integrate data from various sources—such as hazard maps, vulnerability assessments, demographic data, and real-time sensor feeds—to model different disaster scenarios and evaluate potential mitigation strategies. A DSS can help planners answer critical questions, such as identifying the most at-risk populations for a targeted awareness campaign or determining the optimal location for a new flood barrier. By providing a structured, data-driven framework for analysis, these ICT-based applications enable authorities to move from reactive response to proactive mitigation, allocating resources more effectively and ultimately building more resilient communities.

Based on the above source, attempt the following five questions.

266. What does the paragraph emphasize as being equally important as possessing advanced ICT tools for disaster management?
(A) The brand name of the technology provider.
(B) A strategic approach to their deployment.
(C) The physical size of the hardware.
(D) The marketing of the tools to the public.

267. According to the text, a Decision Support System (DSS) for disaster mitigation primarily helps authorities by:
(A) automatically deploying rescue teams to disaster sites.
(B) providing a framework to model scenarios and evaluate mitigation strategies.
(C) designing the user interface for mobile alert applications.
(D) managing the financial budgets for relief operations.

268. Based on the paragraph, what can be inferred about the relationship between data and a GIS in disaster mitigation?
(A) The utility of a GIS is heavily dependent on the quality and timeliness of its data.
(B) A GIS functions effectively even with

Downloaded from www.pdf.tube

outdated or inaccurate data.
(C) The primary purpose of a GIS is to generate new data from scratch.
(D) GIS has been replaced by Decision Support Systems as the primary tool.

269. A municipal planning committee wants to use ICT to decide where to strengthen infrastructure against potential earthquakes. Following the logic of the paragraph, what would be their most effective first step?
(A) Purchase the most expensive ICT software available on the market.
(B) Launch a public relations campaign about the new technology.
(C) Develop a DSS that integrates seismic hazard maps, building vulnerability data, and population density.
(D) Train all city employees on how to write computer code.

270. The paragraph highlights several factors for the efficient deployment of ICT. Which of the following is NOT mentioned as a key consideration?
(A) Interoperability between systems.
(B) Scalability to handle large data volumes.
(C) Training of personnel.
(D) The profitability of the ICT investment.

Direction : Please read the following source carefully.

Sensor technologies represent a cornerstone of modern Disaster Risk Reduction (DRR), providing the foundational data for early warning systems and environmental monitoring. An introduction to these technologies reveals a diverse array of devices designed to detect and measure physical, chemical, or biological phenomena. In the context of environmental risks, sensors are deployed to monitor precursors to natural hazards. For example, seismometers detect ground motion indicative of earthquakes, GPS stations measure crustal deformation, river gauges track water levels to warn of floods, and meteorological sensors monitor atmospheric conditions for cyclones and storms. The data collected by these sensors is transmitted, often in real-time, to a central processing unit where it is analyzed to identify anomalous patterns that may signal an impending disaster. This capability allows authorities to issue timely warnings, enabling evacuation and other protective measures. The integration of sensor networks with computing infrastructure forms the backbone of an effective environmental risk monitoring system. The value of sensor technologies lies not just in the individual devices, but in their systematic deployment as a network that provides a comprehensive, spatio-temporal understanding of evolving environmental threats, thereby shifting the paradigm from post-disaster response to pre-disaster preparedness and risk mitigation.

Based on the above source, attempt the following five questions.

271. What is the fundamental role of sensor technologies in Disaster Risk Reduction as described in the paragraph?
(A) To physically prevent disasters from occurring.
(B) To manage the logistics of post-disaster relief distribution.
(C) To provide foundational data for early warning and monitoring.
(D) To document the history of past disaster events.

NODIA

272. The paragraph provides examples of sensors used for monitoring environmental risks. Which of the following pairs is correctly matched according to the text?
(A) Seismometers – Monitoring water levels.
(B) GPS stations – Measuring crustal deformation.
(C) River gauges – Detecting ground motion.
(D) Meteorological sensors – Analyzing soil composition.

273. It can be inferred from the paragraph that the primary advantage of using a network of sensors over a single sensor is:
(A) lower maintenance costs for the entire system.
(B) reduced data transmission bandwidth requirements.
(C) easier installation and deployment in remote areas.
(D) a more comprehensive understanding of a threat's evolution over space and time.

housing.

239. Match the term in List I with its characteristic in disaster ICT in List II and choose the correct option.

List I: (Term)

P. UAV Flight Time

Q. Social Media Information

R. Sensor Data Transmission

S. AI Model Training

List II: (Characteristic)

1. Can be disrupted by network failure
2. Is often of questionable veracity
3. Requires large, labeled datasets
4. Is a significant operational limitation

(A) P-1, Q-2, R-3, S-4

(B) P-4, Q-2, R-1, S-3

(C) P-2, Q-4, R-3, S-1

(D) P-3, Q-1, R-2, S-4

240. The primary goal of a "solution for future challenges in alerting technologies" is to create a system that is more:

(A) Exclusive, complex, and slow.

(B) Integrated, targeted, redundant, and accessible.

(C) Expensive and difficult to maintain.

(D) Centralized and controlled by a single person.

241. Which of the following falls outside the scope of 'Disaster Informatics'?

(A) Developing data standards for sharing information between agencies.

(B) Creating a decision support system for evacuation planning.

(C) Building a sensor network for flood monitoring.

(D) The manual distribution of blankets in a relief camp.

242. Read the following statements regarding ICT in disaster management:

1. Efficient deployment of ICT requires consideration of the local context, including available infrastructure and user skills.
2. Machine Learning can help in predicting the impact of a disaster based on historical data.
3. Social media is a completely reliable source of information and requires no verification.
4. UAVs are primarily used for long-term reconstruction projects.
5. A robust database management system is crucial for tracking relief supplies and beneficiaries.

Which of the above statement(s) is/are correct?

(A) 1, 2, and 5 only

(B) 3 and 4 only

(C) 1, 3, and 4 only

(D) All of the above

243. The "efficient use of ICT for disaster communication" would involve:

(A) Using technical jargon to showcase expertise during a crisis.

(B) Ensuring clear messages are sent via channels the audience uses.

(C) Delaying all communication until the situation is fully resolved.

(D) Communicating exclusively with authorized high-level technical experts.

244. A city is using a software that integrates data from traffic sensors, weather forecasts, and population density maps to suggest the most efficient evacuation routes in real-time. This is a sophisticated example of:

(A) A multimedia educational application.

(B) An ICT application for decision support.

(C) A social media monitoring tool.

(D) A post-disaster damage assessment robot.

245. Arrange the following in order of increasing data complexity and volume.

1. A single temperature reading from one sensor.
2. A structured database of shelter occupants.
3. A spreadsheet of relief inventory.
4. A continuous stream of unstructured data from social media, video feeds, and sensors (Big Data).

(A) 1, 3, 2, 4

(B) 4, 2, 3, 1

(C) 1, 2, 3, 4

(D) 3, 1, 2, 4

246. What is the primary benefit of using a sensor system for monitoring the structural health of a critical bridge?

(A) It makes the bridge look more modern.

(B) It can provide early warning of potential

Click Here to Buy book on Amazon

(B) By switching to a manual system of data collection during the storm.
(C) By designing a redundant network and integrating satellite data on rainfall.
(D) By ceasing all flood warning activities until the gauges could be repaired.

280. The paragraph mentions that sensors are "susceptible to damage during the very events they are designed to monitor." What is the most direct consequence of this limitation?
(A) An increase in the overall cost of the sensor network.
(B) The generation of inaccurate or false data.
(C) A decrease in the public's trust in technology.
(D) The creation of data gaps at the most critical moments.

Direction : Please read the following source carefully.

The practical application of sensor technologies in disaster risk reduction extends beyond mere data collection to encompass deliberate design and deployment practices, coupled with robust computing infrastructure. The design of a sensor network must be tailored to the specific environmental risks being monitored. This includes strategic placement of sensors to ensure optimal coverage of a hazard-prone area, considering factors like topography, accessibility for maintenance, and communication pathways. For emergency and rescue operations, the deployment of sensors becomes more dynamic. Mobile sensors, which can be attached to vehicles, drones, or even rescue personnel, provide real-time situational awareness in the immediate aftermath of a disaster. The computing infrastructure is the engine that processes the vast streams of data generated by these sensors. It must be capable of ingesting, storing, and analyzing heterogeneous data in real-time to detect anomalies, trigger alerts, and support decision-making for emergency and rescue operations. For instance, data from seismic sensors can be rapidly processed to generate shake maps, which guide rescue teams to areas of greatest potential damage. Similarly, thermal imaging sensors on drones can help locate survivors in a collapsed structure, with the data being relayed and analyzed by the computing infrastructure to direct ground teams effectively.

Based on the above source, attempt the following five questions.

281. According to the paragraph, the design and deployment of a static sensor network should primarily be guided by:
(A) the specific environmental risks and topography of the area.
(B) the cost of individual sensor units.
(C) the availability of international funding.
(D) the aesthetic integration of sensors into the landscape.

282. How does the deployment of sensors for emergency and rescue operations differ from static environmental monitoring as described in the text?
(A) It relies exclusively on satellite-based sensors.
(B) It is more dynamic, often involving mobile sensors.
(C) It is less reliant on computing infrastructure.
(D) It is planned and executed months in advance of a disaster.

283. What is the principal function of the computing infrastructure associated with sensor technologies?
(A) To manufacture the physical sensor devices.
(B) To process sensor data for analysis, alerting, and decision support.
(C) To provide power to the sensor network.
(D) To manually record data readings from each sensor.

284. In a post-earthquake scenario, an emergency response center receives data from multiple sources. Based on the paragraph, which application demonstrates the effective use of sensor data and computing infrastructure for rescue operations?
(A) Processing seismic data to generate shake maps that direct rescue teams to the most affected zones.
(B) Using sensor data to calculate the total financial loss from the earthquake.
(C) Archiving sensor data for future academic research on seismology.
(D) Displaying a simple list of sensor locations on a static map.

Downloaded from www.pdf.tube

274. A geological survey agency wants to enhance its ability to issue timely earthquake warnings. Based on the information in the paragraph, which technology should it primarily invest in?
(A) A system of seismometers and GPS stations to detect ground motion and deformation.
(B) A network of river gauges to monitor water flow in major rivers.
(C) Advanced meteorological sensors to track atmospheric pressure changes.
(D) A series of chemical sensors to analyze gas emissions from the soil.

275. The paragraph suggests that the analysis of data from sensor technologies enables a significant shift in disaster management. This shift is best described as moving from:
(A) community-based management to government-controlled management.
(B) short-term relief to long-term reconstruction.
(C) reactive response to proactive preparedness and mitigation.
(D) manual data collection to automated data collection.

Direction : Please read the following source carefully.

While sensor systems are invaluable for disaster risk reduction, a nuanced understanding requires acknowledging their respective benefits and limitations, and ensuring their efficient use. The primary benefit of sensor systems, such as remote sensing satellites or in-situ ground sensors, is their ability to provide objective, quantitative data over large areas, often in near real-time. This facilitates continuous monitoring of hazards like wildfires, volcanic activity, or floods. However, limitations are significant. Sensors can be expensive to procure, deploy, and maintain. They are also susceptible to damage during the very events they are designed to monitor, leading to data gaps when information is most critical. Furthermore, a limitation of any single type of sensor system is its specific focus; for example, a rain gauge provides data on precipitation but offers no information on ground saturation or landslide risk. Efficient use, therefore, depends on creating a multi-sensor, integrated system. This involves combining data from different types of sensors (e.g., satellite imagery with ground-based moisture sensors) to create a more complete and robust picture of the evolving risk. Efficient use also implies having a redundant and resilient network design to mitigate the impact of individual sensor failures and ensure continuity of data flow for reliable decision-making.

Based on the above source, attempt the following five questions.

276. What is identified in the paragraph as a primary benefit of sensor systems in disaster management?
(A) Their ability to provide objective, quantitative data in near real-time.
(B) Their low cost of procurement and maintenance.
(C) Their inherent invulnerability to damage during disaster events.
(D) Their capacity to function without a power source.

277. The paragraph highlights a significant limitation of using a single type of sensor system. This limitation is its:
(A) inability to produce quantitative data.
(B) excessively high data transmission rate.
(C) incompatibility with modern computing infrastructure.
(D) specific focus, which provides an incomplete picture of the overall risk.

NODIA

278. Based on the text, what can be inferred about the concept of 'efficient use' of sensor technologies?
(A) It means using the minimum number of sensors possible to reduce costs.
(B) It involves integrating data from multiple sensor types and ensuring network redundancy.
(C) It is achieved by relying on a single, highly advanced type of sensor.
(D) It is solely determined by the speed of data processing.

279. A disaster management agency relies on a network of river gauges for flood warnings. During a severe storm, several gauges are damaged and stop transmitting data. According to the principle of efficient use described in the paragraph, how could this situation have been mitigated?
(A) By replacing all river gauges with a different type of sensor.

290. What does the paragraph identify as a key challenge in implementing Big Data and Machine Learning for disaster management?
(A) The need for appropriate computational infrastructure and human expertise.
(B) The public's unwillingness to contribute data through social media.
(C) The lack of potential applications for these technologies in the field.
(D) The inherent inaccuracy of machine learning algorithms.

Direction : Please read the following source carefully.

Among the other emerging technologies transforming disaster risk management, Artificial Intelligence (AI), Unmanned Aerial Vehicles (UAVs), and Robotics are playing increasingly vital roles. Artificial Intelligence, as a broad field, encompasses machine learning but also extends to complex problem-solving and automated decision-making. In disaster management, AI can analyze disparate data streams in real time to predict the cascading effects of a disaster, such as a power outage leading to communication failure and transportation disruption. Unmanned Aerial Vehicles, commonly known as drones, offer unparalleled capabilities for rapid situational awareness. Equipped with high-resolution cameras, thermal sensors, or LiDAR, UAVs can be deployed immediately after a disaster to map affected areas, assess critical infrastructure damage, and locate survivors in inaccessible locations without risking human lives. Robotics extends this capability by enabling physical intervention in hazardous environments. Robots can be sent into collapsed structures to search for victims, deliver emergency supplies, or carry out repairs on damaged infrastructure, such as nuclear facilities, where human entry would be lethal. The integration of these three technologies—AI-powered analysis guiding the deployment of UAVs and robots—creates a powerful synergy for enhancing the efficiency and safety of disaster response and recovery operations.

Based on the above source, attempt the following five questions.

291. What unique capability do Unmanned Aerial Vehicles (UAVs) offer in the immediate aftermath of a disaster, according to the paragraph?
(A) The ability to provide long-term shelter for displaced populations.
(B) The power to prevent a disaster from occurring in the first place.
(C) The capacity for rapid situational awareness and damage assessment in inaccessible areas.
(D) The function of a primary communication network for the public.

292. How does Robotics, as described in the text, complement the function of UAVs in disaster management?
(A) Robotics enables physical intervention in hazardous zones, while UAVs primarily perform observation.
(B) Robotics focuses on data analysis, while UAVs collect the data.
(C) UAVs are used before a disaster, whereas robots are only used long after.
(D) UAVs are ground-based, while robots are exclusively aerial.

293. Based on the paragraph, a key application of Artificial Intelligence (AI) in disaster management is its ability to:
(A) manufacture UAVs and robots at a low cost.
(B) replace the need for all human responders in a disaster zone.
(C) create virtual reality simulations for training purposes only.
(D) predict the cascading effects of a disaster by analyzing complex data.

294. A chemical plant has exploded, releasing toxic gas and making the area unsafe for humans. To assess the damage and search for potential survivors near the site, which technological approach described in the paragraph would be most appropriate?
(A) Relying solely on satellite images taken the next day.
(B) Deploying AI-guided robots and sensor-equipped UAVs to enter and survey the hazardous zone.
(C) Sending in unprotected human rescue teams immediately.
(D) Broadcasting public service announcements

Click Here to Buy book on Amazon

an outdated, non-technological process that does not utilize the capabilities of AI, which is designed to handle digital information efficiently and at scale.

41. (C) Operating indefinitely without power or maintenance.
Sensor technologies provide numerous benefits, including objective data collection and the ability to monitor dangerous locations continuously. However, these systems are not autonomous in terms of resources; they require consistent power supplies and regular maintenance to remain functional over time. Batteries must be replaced, and instruments must be calibrated to ensure accuracy. Assuming that technology can operate indefinitely without human intervention or energy input is a misconception that can lead to system failure during critical disaster events.

42. (A) 1, 3, and 4 only
Effective database management is essential throughout all phases of disaster risk reduction, not just during recovery. It provides a structured way to handle large volumes of data concerning affected populations, relief inventory, and damage assessments, ensuring information integrity and accessibility. Well-designed databases support rapid decision-making by allowing managers to query information and generate reports quickly. Relying on paper-based records is inefficient and does not meet the standards of modern database management, which focuses on digital accuracy and seamless information sharing.

43. (D) Rapid dissemination of unverified information and rumors.
The openness of social media allows information to travel at incredible speeds, but this also means that unverified rumors can spread before authorities can intervene. During a disaster, misinformation can cause unnecessary panic, lead people into dangerous situations, and hinder the effectiveness of official response efforts. While network load and responder distraction are concerns, the potential for public confusion caused by rumors is the most significant negative impact, requiring agencies to actively monitor and counter false information online.

44. (B) The ability to interpret data visualizations and analytical outputs to make informed decisions.
As disaster management systems become more integrated and data-driven, the primary role of managers shifts from data collection to data interpretation. While technical skills like coding or infrastructure repair are valuable for specialists, emergency managers must be able to understand the insights provided by technology. This competency allows them to translate complex visualizations and analytical results into strategic actions and resource allocations. Effective decision-making in modern disaster scenarios depends on the ability to synthesize technological outputs with practical operational needs.

45. (A) 2, 4, 1, 3
A sensor-based early warning system follows a specific data lifecycle to function effectively. It begins with the sensor acquiring data from the physical environment, which is then transmitted to a central server. Once the data is received, it is analyzed and compared against predefined thresholds to identify potential hazards. If a risk is detected, a warning message is disseminated to the relevant authorities and the public. This structured process ensures that alerts are based on objective measurements and timely analysis.

46. (D) Computing Infrastructure.
Computing infrastructure encompasses the physical and digital foundation required to support information technology functions. In disaster risk reduction, this includes the servers, software, networks, and data centers that process and store critical data from various sources like sensors and satellites. Without this underlying infrastructure, specialized applications like GIS or early warning systems could not operate. It provides the necessary processing power and connectivity to handle the complex information flows required for effective disaster management and situational awareness.

47. (C) Statement I is true, but Statement II is false.
Unmanned Aerial Vehicles offer a significant advantage for rapid damage assessment because they can be deployed quickly and more affordably than traditional manned aircraft. They provide high-resolution imagery that is essential for initial surveys in disaster zones. However, the use of UAVs is not unregulated; operators must comply with airspace laws, and their use often raises

NODIA

300. Based on the text, what can be inferred as a necessary practice for disaster management agencies that use social media?

(A) They must have a system in place to verify information and counter false narratives.

(B) They should discourage the public from posting any information to avoid confusion.

(C) They should use social media only for post-disaster fundraising activities.

(D) They should treat every piece of user-generated content as factual and act on it immediately.

www.nodia.in

Downloaded from www.pdf.tube

on the radio.

295. The paragraph suggests a synergistic relationship between AI, UAVs, and robotics. What is the nature of this synergy?
(A) The technologies compete with each other for funding and resources.
(B) Each technology works in complete isolation from the others.
(C) AI analyzes data to guide the deployment of UAVs and robots for a more effective response.
(D) UAVs are used to control both AI systems and ground-based robots.

Direction : Please read the following source carefully.

Social media has emerged as a powerful, albeit complex, tool in the domain of disaster risk management. Its primary strength lies in its ability to facilitate instantaneous, multi-directional communication. During a crisis, official agencies can use platforms like Twitter and Facebook to disseminate real-time warnings, evacuation notices, and safety instructions to a vast audience. Simultaneously, social media empowers the affected population to become active participants in the information ecosystem. Individuals can report incidents, share their location, request help, and provide on-the-ground updates, creating a rich, crowdsourced layer of situational awareness that can be invaluable for response agencies. This user-generated content, when properly verified and analyzed, can help authorities identify critical needs and allocate resources more effectively. However, the use of social media is not without significant challenges. The rapid spread of misinformation and rumors can cause panic, confusion, and misdirection of resources, actively hampering response efforts. Therefore, a critical component of leveraging social media for disaster management involves establishing robust mechanisms for monitoring, verifying information, and actively countering false narratives. The challenge is to harness the immense potential of social media for rapid communication and crowdsourcing while mitigating the substantial risks posed by misinformation.

Based on the above source, attempt the following five questions.

296. What is described as the primary strength of social media in disaster management?
(A) Its ability to function without an internet connection.
(B) The complete accuracy of all information shared on the platforms.
(C) Its role as a formal and legally binding communication channel.
(D) Its capacity for instantaneous, multi-directional communication.

297. The paragraph highlights a "dual role" of social media during a disaster. This refers to its function as a tool for:
(A) official dissemination by authorities and a source of crowdsourced information from the public.
(B) entertainment for the public and a data archive for researchers.
(C) fundraising for relief efforts and a platform for political debate.
(D) long-term recovery planning and short-term weather forecasting.

NODIA

298. What is identified in the paragraph as a significant challenge associated with using social media for disaster response?
(A) The high cost of setting up official social media accounts.
(B) The rapid and widespread dissemination of misinformation and rumors.
(C) The limited number of people who use social media platforms.
(D) The difficulty in translating content into different languages.

299. An earthquake has just occurred, and emergency services are trying to understand which neighborhoods are most affected. According to the paragraph, how could social media aid this process?
(A) By waiting for an official damage report to be posted by the government's account.
(B) By analyzing verified, user-generated reports, photos, and help requests from different areas.
(C) By assuming that areas with no social media activity are completely unaffected.
(D) By focusing only on posts from certified news journalists.

scale disasters through enhanced community engagement.

7. (D) Alerting technologies are exclusively government-controlled and cannot be used by private organizations.
Modern alerting systems utilize a wide variety of technologies, including mobile alerts, radio broadcasts, and sirens, to provide redundancy and ensure wide reach. While governments typically oversee official emergency warnings, private organizations and community groups also utilize these technologies to communicate risks to specific populations or employees. Integrating multiple channels remains a key strategy for overcoming the digital divide and ensuring that all individuals receive timely, life-saving notifications through various public and private communication networks.

8. (A) To provide accurate and relevant data to aid resource planning.
Decision support systems in disaster management are designed to assist human managers by processing complex datasets into actionable insights. Their primary purpose is to provide relevant, high-quality data that facilitates strategic resource planning and the evaluation of different mitigation options. These systems do not replace human judgment but rather enhance it by modeling potential scenarios and identifying vulnerabilities, ensuring that interventions are well-informed and targeted effectively during the preparation and mitigation phases of disasters.

9. (A) P-3, Q-1, R-2, S-4
Different ICT tools serve specialized functions within the disaster management framework to enhance overall effectiveness. Geographic Information Systems are primarily used for spatial analysis and vulnerability mapping, while early warning systems focus on disseminating critical alerts before hazards strike. Social media platforms enable the crowdsourcing of real-time situational awareness from the public. Simultaneously, decision support systems utilize modeled scenarios to guide strategic planning and resource allocation across various disaster phases, ensuring comprehensive data-driven emergency management.

10. (A) Big Data Analytics - Analyzing datasets to find risk patterns.
Big data analytics involves the sophisticated processing of vast and diverse datasets to uncover hidden patterns, correlations, and trends related to disaster risks. By identifying these patterns, authorities can predict potential impacts and improve long-term mitigation strategies. Other technologies like UAVs and robotics have specific operational roles, such as aerial mapping or hazardous search missions, but big data remains centered on the analytical task of extracting meaningful insights from massive information streams to manage risks.

11. (D) Relying exclusively on traditional word-of-mouth communication.
Modern disaster management strategies increasingly integrate diverse technologies to enhance efficiency and reach. While traditional methods like word-of-mouth have historical value, they lack the speed, scale, and data integration capabilities offered by digital tools. Using mobile networks for alerts, GIS for hazard mapping, and satellite imagery for damage assessment represents the core of contemporary ICT approaches. These technologies provide structured, rapid, and verifiable information streams that are essential for coordinating effective responses across the entire lifecycle.

12. (B) 2 and 4 only
Effective integration of digital tools in disaster scenarios requires thorough pre-disaster training and capacity building for all personnel involved. This ensures that responders can operate equipment reliably under pressure and that communities understand the information provided. Furthermore, ensuring that systems are interoperable allows for seamless data sharing between different agencies. Efficient deployment avoids overly complex tools or one-size-fits-all solutions, focusing instead on resilience, usability, and collaborative information frameworks that function effectively during crises and emergencies.

13. (C) Cause: Real-time sensor use; Effect: Enhanced hazard warning.
The deployment of sensors for continuous environmental monitoring directly impacts the effectiveness of early warning systems.

Click Here to Buy book on Amazon

ANSWERS

1. (B) Utilizing digital technology to manage information across all phases of a disaster lifecycle.
Information and Communications Technology plays a critical role by integrating digital tools to handle data throughout mitigation, preparedness, response, and recovery phases. It facilitates real-time information flow, enhances situational awareness, and supports data-driven decision-making. By streamlining communication between authorities and the public, these technologies ensure that critical information reaches stakeholders efficiently, ultimately minimizing the social and economic impacts of various catastrophic events across the entire disaster management cycle.

2. (C) Statement I is true, but Statement II is false.
Modern media environments have evolved significantly with the rise of social media platforms, providing interactive, multi-directional channels for crisis communication. While these digital avenues offer new ways to share vital information during emergencies, the primary goal of efficient ICT use is enhancing effective information management and decision support across the disaster lifecycle. It is not merely concerned with reducing the hardware costs associated with various communication systems, but rather with improving operational efficiency.

3. (B) 2 and 3 only
Disaster informatics encompasses the comprehensive application of information technology across all stages of a disaster, including mitigation and recovery, rather than being limited to the response phase alone. Furthermore, multimedia educational tools serve as effective methods for increasing public awareness and understanding of risks. While alerting the public is a crucial function, ICT serves a much broader range of purposes, including resource planning, situational mapping, and long-term risk reduction strategies for different hazards.

NODIA

4. (D) Applying information science to understand and manage disasters.
Disaster informatics is an interdisciplinary field that leverages information science and technology to handle the complex data generated throughout the disaster management cycle. By focusing on how information is collected, processed, and disseminated, it provides a structured framework for improving situational awareness and operational efficiency. This approach ensures that data-driven insights are effectively used to mitigate risks, prepare communities, and coordinate rescue efforts during various emergencies, regardless of the specific disaster type.

5. (C) An interactive game simulating safe responses to tremors.
Interactive applications are highly effective for risk reduction education because they engage users in active learning through simulated environments. By practicing safe responses to tremors within a game, children can build muscle memory and develop practical knowledge that is more easily recalled during an actual event. This hands-on approach is superior to passive methods like reading text or watching videos, as it fosters deeper engagement and helps individuals understand the immediate actions necessary for safety.

6. (A) Both A and R are true and R is the correct explanation of A.
The widespread adoption of social media has fundamentally transformed how information is shared during crises by enabling real-time, multi-directional communication. Unlike traditional one-way broadcasts, these platforms allow authorities and the public to interact simultaneously, facilitating rapid data collection and situational updates. This shift ensures that survivors can report emergencies directly while agencies disseminate verified instructions, creating a more dynamic and responsive environment for managing various types of large-

highest priority. Acoustic sensors are specifically designed to detect faint sounds, such as tapping or voices, coming from within debris where human rescuers cannot see. These sensors provide vital information that guides search and rescue teams to precise locations, increasing the chances of survival. This targeted application of technology is more beneficial for field operations than regional satellite data or historical database management systems.

21. (A) Both A and R are true and R is the correct explanation of A.
Big data analytics significantly enhances disaster risk management by processing vast quantities of information from diverse sources like sensors and satellite imagery. These large datasets allow authorities to identify complex patterns, predict potential hazard impacts, and optimize emergency response strategies. By integrating real-time information with historical data, agencies can make more informed decisions, ensuring that resources are deployed where they are most needed and improving the overall efficiency of mitigation and preparedness efforts across different regions.

22. (B) Vulnerability to damage from the very hazards they are meant to monitor.
While sensor systems are essential for detecting hazards, they are often physically located in high-risk areas, making them susceptible to destruction during the events they monitor. For example, a flood sensor might be washed away by a surge, or a seismic station could be damaged by ground rupture. This vulnerability requires engineers to design ruggedized equipment and build redundancy into networks to ensure that data continues to flow even if individual components are compromised during a disaster.

23. (D) Automating complex data analysis to predict disaster paths and damage.
Artificial intelligence plays a transformative role in disaster management by automating the analysis of large, complex datasets to produce high-level predictions. AI models can forecast the path of a hurricane or estimate potential damage patterns based on real-time environmental inputs. This automation allows for faster decision-making than manual methods, providing emergency managers with critical insights when time is limited. Such capabilities are essential for effective risk assessment and the proactive deployment of resources before a disaster strikes.

24. (B) P-2, Q-1, R-4, S-3
Emerging technologies offer specialized capabilities that address different challenges in disaster risk reduction. Robotics are ideal for navigating hazardous, confined spaces during search and rescue, while machine learning excels at identifying historical patterns to predict future risks like landslides. Big data platforms handle the massive influx of real-time information from multiple sources to maintain situational awareness. Unmanned Aerial Vehicles provide the ability to rapidly map large, inaccessible areas, ensuring that responders have accurate visual data during critical operations.

25. (C) A tool for crowdsourcing information and enhancing situational awareness.
Social media serves as a dynamic ICT approach that leverages the widespread use of mobile devices to collect information directly from the public. This crowdsourcing enables authorities to gain real-time situational awareness by observing user-generated reports on local conditions and damages. Unlike traditional one-way communication models, social media facilitates an interactive environment where information flows from many sources to many recipients. This helps fill data gaps during the chaotic response phase of a disaster when official information is limited.

26. (A) Long-term psychological counseling for affected populations.
Unmanned Aerial Vehicles are highly effective for technical and logistical tasks, such as conducting rapid damage assessments, searching for missing persons in difficult terrain, and delivering critical medical supplies. However, they are not designed for providing human-centric services like long-term psychological counseling. While UAVs can support the initial stages of a disaster by providing data and supplies, the emotional and mental recovery of affected populations requires specialized human intervention and long-term support systems that technology cannot directly replace.

NODIA

By providing real-time data on physical properties like water levels or seismic activity, these technologies allow authorities to detect precursors to disasters immediately. This rapid acquisition of data enables the dissemination of timely warnings, which reduces the time between a hazard's detection and public notification, ultimately saving lives through faster community response and better preparation for impending environmental risks.

14. (D) Using Unmanned Aerial Vehicles (UAVs) equipped with cameras.
Unmanned Aerial Vehicles provide a rapid and cost-effective method for conducting initial damage assessments in areas that are dangerous or physically unreachable after a flood. These devices can fly over affected regions to capture high-resolution imagery and video, offering responders a clear view of the situation on the ground. This real-time visual data is crucial for identifying structural failures, locating stranded individuals, and prioritizing resource allocation during the immediate response phase when information is critical.

15. (B) 4, 2, 3, 1
Utilizing a decision support system follows a logical progression starting with the definition of specific problems and objectives. Once goals are set, relevant hazard and vulnerability data must be collected and entered into the system. Analysts then evaluate the generated scenarios and recommendations to identify the most effective course of action. Finally, the chosen mitigation strategy is implemented. this structured sequence ensures that technology effectively informs strategic choices, leading to better outcomes in disaster risk reduction.

16. (B) To detect and measure a physical property and convert it into a signal.
Sensor technology serves as the fundamental layer for monitoring environmental changes by converting physical phenomena into readable data signals. These devices measure various properties, such as pressure, temperature, or motion, which are essential for identifying potential hazards. In the context of disaster risk reduction, sensors provide the objective data needed to trigger early warnings and inform response strategies. They act as the primary interface between the physical world and digital information management systems during disasters.

17. (C) Statement I is true, but Statement II is false.
Sensor systems offer a significant advantage by providing continuous, real-time data from remote or hazardous environments where manual observation is difficult. This capability is vital for early warning and ongoing monitoring of environmental risks. However, these systems are not necessarily inexpensive and they require regular maintenance and specialized deployment to remain functional. Power supply issues and environmental damage are common challenges that must be managed to ensure the long-term reliability of any sensor network used.

18. (A) 1 and 3 only
Efficient use of sensor technologies requires establishing reliable power sources and communication links to ensure uninterrupted data flow during emergencies. Furthermore, the collected data must be integrated into larger decision-support systems to be truly useful for disaster management. Placing sensors in suboptimal locations or choosing the most expensive options regardless of need can lead to system failure or wasted resources. Success depends on strategic placement and the ability to convert raw sensor measurements into actionable information.

19. (C) Using strain gauges and accelerometers to monitor the structural health of a bridge.
Monitoring structural health is a proactive application of sensor technology designed to identify vulnerabilities before a disaster occurs. Strain gauges and accelerometers measure physical stress and movement, providing data on how a structure responds to environmental forces. This information allows engineers to detect early signs of failure or damage from seismic activity, enabling timely maintenance or closure. Such technical monitoring is a key component of disaster risk reduction for critical infrastructure in various urban environments.

20. (D) Acoustic sensors to detect sounds from trapped survivors.
In the immediate aftermath of a building collapse, finding trapped individuals is the

Downloaded from www.pdf.tube

to reduce risks before they manifest into actual catastrophes during future events.

34. (A) Water level sensors and rain gauges placed upstream.
Flash floods in narrow valleys occur rapidly, requiring localized and immediate data for effective warnings. Placing water level sensors and rain gauges upstream allows for the detection of sudden increases in precipitation or river levels before they reach downstream populations. This specific sensor combination provides the necessary lead time for evacuation and protective actions. Other sensors, such as those for air quality or traffic noise, are irrelevant to flood monitoring and would not provide the data needed for a successful early warning system.

35. (C) The pre-existence of robust infrastructure and trained personnel.
The successful deployment of ICT tools during a disaster depends more on the foundational readiness of the system than the specific features of the technology itself. Without robust communication infrastructure and personnel who are trained to use the tools effectively, even the most advanced software will fail to deliver results. Preparedness activities, including capacity building and infrastructure hardening, ensure that technology remains operational and useful when it is most needed, facilitating a more coordinated and efficient emergency response.

36. (C) A is true but R is false.
Designing sensor networks for disaster risk reduction requires a tailored approach that accounts for the specific environmental context and the nature of the hazard being monitored. A network built for volcanic monitoring uses specialized gas sensors and seismic instruments that are not suitable for detecting tsunami wave heights, which requires pressure sensors or tide gauges. Technology must be fit-for-purpose, and the assumption that one type of sensor network can be used for entirely different hazards without modification is incorrect.

37. (C) Issues of data quality, veracity, privacy, and security.
While Big Data offers immense potential for disaster management, it introduces significant challenges related to information integrity and ethics. Ensuring the veracity of data from diverse, unverified sources like social media is difficult, as misinformation can easily spread. Furthermore, collecting and analyzing large datasets raises concerns about individual privacy and data security. Managing these issues is essential for maintaining public trust and ensuring that the insights derived from Big Data are accurate and ethically handled during critical emergency operations.

NODIA

38. (B) Decision support in disaster mitigation.
Overlaying flood hazard maps with population density data allows planners to identify high-risk areas and prioritize mitigation efforts. This spatial analysis is a classic application of ICT for decision support, as it provides the information needed to design effective risk reduction strategies, such as land-use regulations or infrastructure improvements. By identifying where the most vulnerable people live in relation to potential hazards, authorities can make informed decisions that minimize the impact of future disasters before they occur.

39. (B) P-3, Q-4, R-1, S-2
Different sensor types provide specialized data essential for monitoring various hazards. Accelerometers measure ground motion during earthquakes, while infrared cameras are vital for identifying survivors or fire hotspots. Infrasound sensors can detect low-frequency sound waves from distant volcanic eruptions or avalanches. Strain gauges monitor the physical stress on structural components, providing early warning of potential failures. Matching the correct sensor to the hazard is a fundamental practice in designing effective monitoring and early warning systems for disaster risk reduction.

40. (A) Artificial Intelligence - Manually sorting paper-based application forms.
Artificial intelligence is characterized by its ability to automate complex data processing tasks, such as pattern recognition or predictive modeling, rather than performing manual clerical work. In contrast, database management systems are correctly used for organizing inventory, UAVs provide visual feeds from inaccessible areas, and social media can spread verified information. The manual sorting of paper documents is

27. (B) 2 and 3 only
While social media is a powerful tool for communication, it presents significant challenges, including the rapid spread of unverified rumors and misinformation, which can lead to public panic. Additionally, the massive volume of data generated during a crisis can overwhelm authorities, making it difficult to extract actionable insights. Access is also not uniform, as digital divides exist across different demographic groups. Therefore, effective use requires sophisticated filtering and a realization that information accuracy is never guaranteed on these platforms.

28. (B) The shift from a one-to-many broadcast model to a many-to-many interactive model.
The changing media environment refers to the transition from traditional, one-way communication channels like television and radio to interactive, digital platforms. This shift allows for many-to-many communication, where both authorities and the public can share, receive, and respond to information simultaneously. This interactivity enhances the speed and reach of emergency messages but also introduces complexity in managing information flow. Understanding this evolution is crucial for disaster managers who must navigate multiple communication channels to reach diverse and connected audiences.

29. (C) Performing tasks in environments that are dangerous or inaccessible to humans.
Robotics in disaster scenarios are primarily used to minimize risks to human rescuers by operating in hazardous environments. These machines can enter collapsed buildings, inspect chemical spills, or navigate underwater areas that are unstable or toxic. By performing these dangerous tasks, robots provide essential data and support search efforts without endangering lives. While they assist human responders, their main objective is to provide capabilities that exceed human physical limits in unstable or hostile conditions during emergency operations.

30. (A) 3, 2, 4, 1
The application of technology in disaster management has progressed from basic communication systems to advanced data analytics. Early efforts relied on the telegraph for simple messaging. This was followed by the development of satellite-based remote sensing for broad environmental observation. Later, Geographic Information Systems (GIS) allowed for detailed hazard mapping. Most recently, social media analytics has emerged as a tool for real-time situational awareness. This chronological evolution reflects the increasing complexity and sophistication of information management in modern disaster risk reduction.

31. (A) Using multiple, independent communication channels to deliver the same alert.
Redundancy is a critical principle in disaster alerting that ensures a message reaches the public even if one system fails. By using multiple independent channels, such as SMS, radio, and sirens, authorities increase the probability that at least one notification will be received. This approach is essential for reaching diverse populations with different access to technology. Redundancy minimizes the risk of total communication failure during extreme events, providing a more resilient and inclusive warning framework for communities.

32. (C) Statement I is true, but Statement II is false.
Machine learning models are highly effective at analyzing historical datasets to identify patterns and predict the probability of future events, such as aftershocks or secondary hazards. A major advantage of these models is their ability to process vast amounts of unstructured data, including text and images, which allows for more comprehensive risk assessments. Contrary to common misconceptions, ML is specifically valued for its capacity to handle complex, varied information formats that traditional analytical methods might struggle to process effectively.

33. (C) 1, 2, and 3 only
An effective decision support system for disaster mitigation integrates several key components to provide actionable insights. This includes a comprehensive database containing hazard and vulnerability information, a model base for simulations, and a user-friendly interface for visualizing results. These elements allow managers to analyze potential scenarios and plan interventions effectively. While post-disaster data is important, a system focused on mitigation must prioritize pre-disaster data and modeling

Click Here to Buy book on Amazon

legitimate privacy and security concerns. Proper deployment requires balancing the technological benefits with regulatory compliance and ethical considerations regarding data collection in sensitive areas.

48. (C) 1, 2, and 3 only
Artificial intelligence and machine learning have diverse applications in disaster management, such as predicting cyclone intensity, identifying damaged buildings from satellite imagery, and optimizing logistics for relief supplies. These tasks utilize the ability of AI to analyze complex data and identify patterns. However, manually piloting a helicopter is a traditional human-led operation that does not fall under the category of AI application. AI is focused on augmenting or automating informational and analytical tasks to improve the overall efficiency of disaster management.

49. (B) Lack of access and digital literacy among certain vulnerable populations.
Relying exclusively on social media for emergency communication can exclude vulnerable groups, such as the elderly or those in low-income and rural areas, who may lack internet access or the skills to use digital platforms. This "digital divide" ensures that some of the most at-risk individuals might not receive critical life-saving information. Therefore, disaster managers must use a variety of communication channels, including traditional media like radio and sirens, to ensure that emergency alerts reach the entire population regardless of technological proficiency.

50. (A) Ensuring that the message is timely, accurate, and reaches the intended audience through appropriate channels.
Efficient use of ICT in disaster communication focuses on the effectiveness of the information exchange rather than the complexity of the tools used. It involves delivering accurate messages at the right time to ensure that people can take protective actions. This requires understanding the target audience and selecting the most appropriate channels to reach them, whether through mobile alerts, social media, or traditional broadcasts. The goal is to maximize the impact of the communication to save lives and reduce risks.

51. (A) Both A and R are true and R is the correct explanation of A.
Robots are invaluable in urban search and rescue because they can navigate hazardous environments that are too dangerous for humans or search dogs. Their ability to access small voids and unstable areas within collapsed buildings allows them to locate survivors and assess conditions without risking additional lives. This specific capability makes robotics a critical tool for expanding the reach of rescue teams during the initial response phase. The assertion and reason correctly highlight how technical mobility directly addresses the safety challenges of disaster sites.

52. (D) Creating integrated, multi-modal systems that can target specific geographic areas and use multiple delivery paths.
Future solutions for alerting technologies must focus on increasing the reach and resilience of warning systems. This involves creating integrated systems that use multiple delivery paths, such as SMS, radio, and sirens, to ensure redundancy. Furthermore, the ability to target specific geographic areas minimizes unnecessary panic and ensures that relevant information reaches those most at risk. By combining different technologies into a unified framework, disaster managers can overcome current limitations and create more inclusive and effective early warning systems for diverse populations.

53. (C) Analyzing anonymized location data from mobile phones to map movements.
Big Data in disaster management involves processing massive, diverse datasets to gain insights that are not possible with traditional methods. Analyzing anonymized mobile phone location data to track population movements during an evacuation is a prime example. This large-scale analysis provides a real-time picture of where people are going and where bottlenecks might be occurring. Unlike manual ledgers or single spreadsheets, Big Data leverages computational power to synthesize information from millions of data points, supporting more effective strategic planning and response.

54. (B) P-4, Q-1, R-2, S-3
Understanding key ICT terms is essential for navigating the technological landscape of

NODIA

disaster management. Disaster informatics is the interdisciplinary study of information use across all phases, while computing infrastructure refers to the underlying hardware and networks that support data processing. Multimedia applications provide interactive educational tools for risk awareness. Alerting technologies, such as those using the Common Alerting Protocol, are the systems used to broadcast emergency warnings. Correctly identifying these components ensures that technology is applied effectively and integrated into broader management frameworks.

55. (D) They can provide continuous, high-frequency data streams automatically.
Sensor systems offer a major advantage over manual observations by providing a continuous and automated stream of data. This allows for high-frequency monitoring of environmental conditions, which is essential for detecting rapid changes that might indicate an impending hazard. Unlike humans, sensors can operate 24/7 without fatigue and can be placed in hazardous or remote locations. This objective and quantitative data is critical for early warning systems and scientific modeling, providing a more reliable foundation for disaster risk reduction activities.

56. (A) Typewriters
Emerging technologies like artificial intelligence, Unmanned Aerial Vehicles, and big data analytics offer innovative ways to improve disaster management through better prediction, assessment, and situational awareness. These modern tools contrast sharply with outdated technologies like typewriters, which lack the connectivity and processing power required for contemporary disaster risk reduction. The focus of modern management is on leveraging digital tools that can handle large volumes of data and provide rapid communication, which is essential for responding to complex and fast-moving emergency scenarios.

57. (B) 2, 3, and 4 only
ICT for decision support in disaster mitigation focuses on using data analysis to inform long-term planning and prioritization. These systems can simulate the impact of different mitigation measures, such as flood walls or retrofitting, and perform cost-benefit analyses to guide investment. While they provide essential insights, they do not automate decisions or replace human managers. Instead, they enhance the quality of human judgment by providing a more comprehensive understanding of risks and the potential effectiveness of various interventions before a disaster occurs.

58. (A) Strategic placement of sensors (e.g., extensometers, rain gauges) in geologically critical spots.
The effectiveness of a sensor network for landslide monitoring depends on the strategic placement of instruments in areas that are geologically most likely to show signs of movement. Sensors like extensometers and rain gauges must be positioned where they can detect changes in ground tension and precipitation levels that trigger landslides. Aesthetic considerations or ease of visibility are irrelevant to the technical success of the network. Strategic deployment ensures that the data collected is representative of the actual risk, providing reliable early warnings.

59. (D) To automatically filter and classify relevant messages, such as requests for help, from the noise.
During a disaster, the sheer volume of social media posts can be overwhelming, making it impossible for humans to read every message. Machine learning is used to automatically filter and classify this data, identifying critical information like requests for help or damage reports. By separating actionable information from the “noise” of general conversation, ML allows emergency managers to gain situational awareness more quickly. This automated processing is essential for utilizing social media effectively as a real-time data source during large-scale emergency events.

60. (A) 2, 3, 1, 4
The information flow in an ICT-enabled emergency response typically starts with a citizen reporting an incident through a digital platform. This data is then sent to an emergency operations center where it is processed, verified, and used to dispatch first responders with specific details. Once on the scene, responders send situational reports back to the center to provide ongoing updates. This structured sequence ensures that information is consolidated and used effectively

Downloaded from www.pdf.tube

to coordinate the response, from the initial report to field operations.

61. (C) Using GIS and modeling software to identify long-term risks and plan land use.
In the mitigation phase, the primary goal is to reduce long-term risks through informed planning. ICT approaches like GIS and modeling software are essential for identifying hazard-prone areas and simulating the potential impact of disasters. This information allows authorities to implement land-use regulations and build resilient infrastructure. While search and rescue or food distribution are critical, they belong to the response phase. Mitigation focuses on pre-emptive actions that utilize data to minimize the severity of future events through strategic spatial analysis.

62. (D) Statement I is false, but Statement II is true.
The changing media environment is defined by the proliferation of diverse, interactive platforms, rather than just an increase in traditional television channels. Efficient use of ICT for disaster communication requires tailoring messages to specific audiences and selecting the most appropriate channels to reach them. This targeted approach ensures that emergency information is understandable and accessible to different demographic groups. Modern communication strategies must move beyond one-size-fits-all broadcasts to leverage the full range of available digital and traditional media for effective disaster management.

63. (A) 1 and 3 only
Robotics offer significant benefits in emergency operations by performing tasks that are physically demanding or hazardous for humans. This includes lifting heavy debris and inspecting material spills in toxic environments. While they provide detailed data, they are not typically used for mapping undamaged areas or performing complex field surgeries, which still require human expertise and specialized environments. The focus of robotics is on search, rescue, and hazardous inspection, providing capabilities that enhance the safety and effectiveness of responders in unstable disaster zones.

64. (B) It can detect precursory signals like ground deformation and gas emissions, enabling timely warnings.
Sensor networks for volcanic monitoring are designed to detect subtle physical changes that precede an eruption, such as ground swelling or changes in gas composition. By providing continuous data on these precursory signals, the system allows scientists to forecast eruptions and issue timely warnings. This information is critical for evacuations and public safety. While technology cannot stop an eruption, it provides the essential data needed to manage the risk and minimize the loss of life through better situational awareness and proactive response planning.

65. (B) Deploying tools that are fit for purpose, reliable, and can be effectively used by the personnel on the ground.
Efficient deployment of ICT tools focuses on selecting technology that matches the specific needs and context of a disaster. This means prioritizing reliability and usability over the sheer number of features or the age of the software. For technology to be effective, personnel on the ground must be trained and capable of using it under stressful conditions. A fit-for-purpose approach ensures that tools solve actual operational problems and integrate into broader management frameworks, leading to a more coordinated and successful emergency response.

NODIA

66. (A) Both A and R are true and R is the correct explanation of A.
Ensuring inclusivity is a major challenge for future alerting technologies because the “digital divide” can prevent information from reaching all populations. If alerts are only sent through high-tech channels like smartphones, groups such as the elderly or low-income and rural residents may be excluded. This highlights the need for multi-modal systems that combine digital and traditional communication methods. The assertion and reason correctly identify that technological advancement must be balanced with strategies that ensure no one is left behind during critical emergencies.

67. (C) They have unlimited flight time and are not affected by weather conditions.
Unmanned Aerial Vehicles are powerful tools for creating 3D models and monitoring hazards,

is also a major risk, as systems can fail or produce misleading results. These technologies are not immune to cyber-attacks and cannot replace the need for ground-level information. Effective management requires balancing technological benefits with critical ethical, technical, and operational considerations to ensure safety.

94. (D) A system that sends a text message (SMS) to all mobile phones in a specific geographic area.
Location-based SMS and cell broadcast are current, widely implemented solutions for alerting populations in specific geographic areas about imminent threats. These technologies leverage existing mobile networks to deliver timely warnings directly to individuals' phones. Unlike experimental or futuristic concepts, these systems provide a practical and effective way to reach large numbers of people quickly. They are a cornerstone of modern early warning systems, allowing authorities to disseminate actionable information that can trigger immediate protective responses in communities facing localized hazards like floods or gas leaks.

95. (A) Trained and licensed pilots, a clear mission objective, and a system for managing and analyzing the collected data.
The efficient use of UAVs in disaster response requires a comprehensive operational framework beyond just having the hardware. This includes skilled pilots who understand airspace regulations, a well-defined mission to ensure relevant data is collected, and the necessary infrastructure to process and analyze that data. Without these components, the information gathered may be unusable or the operation itself could be unsafe. Success depends on integrating UAVs into broader emergency management workflows, ensuring that their aerial insights contribute directly to effective decision-making and resource allocation.

96. (A) Both A and R are true and R is the correct explanation of A.
Social media is described as a double-edged sword because its ability to disseminate information rapidly is both its greatest strength and a significant vulnerability. While it allows for crowdsourcing and quick alerts, the lack of verification means that rumors and misinformation can spread just as fast. This can cause public confusion and panic during a disaster, complicating official response efforts. The assertion and reason correctly identify this dual nature, highlighting the need for disaster managers to actively monitor and verify social media content to use these platforms effectively.

97. (B) Guaranteed immunity from damage during hazard events.
Sensor technologies offer many benefits, such as high temporal resolution and the ability to monitor remote areas, providing quantitative data for scientific modeling. However, they are physical devices and are never guaranteed to be immune from damage during a disaster. In fact, their placement in high-risk zones makes them vulnerable to destruction from the very hazards they monitor. Effective system design must include strategies for ruggedization and redundancy to ensure that data collection can continue even if some components are lost during an extreme environmental event.

98. (A) Prioritization and resource allocation during an emergency response.
AI systems can process massive amounts of data from multiple sources to identify the most critical incidents during a crisis. By filtering through calls, social media, and sensors, AI helps emergency managers understand where the greatest needs are in real-time. This automated analysis is essential for effective prioritization and resource allocation when response agencies are overwhelmed. By focusing attention on high-priority incidents, AI ensures that life-saving interventions are deployed more efficiently, improving the overall effectiveness of the emergency response and helping to minimize the impact of the disaster.

99. (A) P-4, Q-1, R-3, S-2
Understanding key ICT concepts is essential for managing information during disasters. Interoperability ensures that different systems can share data, while scalability allows systems to handle massive surges in users during a crisis. Crowdsourcing enables the collection of information from the public, and data veracity addresses the accuracy and trustworthiness of that information. These concepts are fundamental to building resilient and effective information frameworks that can support the complex and

Click Here to Buy book on Amazon

individuals and communities to reduce their own risks before an event occurs.

74. (A) Artificial Intelligence
Using machine learning to automatically analyze satellite imagery for damage assessment is a direct application of artificial intelligence. AI algorithms can be trained to recognize specific features, such as collapsed roofs or flooded streets, allowing for a much faster and more accurate estimation of impact than manual methods. This capability is essential for large-scale disasters where rapid assessment is needed to prioritize relief efforts. By automating the visual analysis of post-disaster data, AI provides emergency managers with critical situational awareness during the immediate response phase.

75. (A) 3, 4, 1, 2
ICT-related actions follow a logical timeline across the disaster cycle, starting with pre-disaster vulnerability mapping using GIS. As a threat becomes imminent, early warning messages are broadcast to the public via mobile phones. In the immediate aftermath, UAVs are deployed to survey damage and identify critical needs. Finally, during the recovery phase, social media is used to manage donations and coordinate volunteer efforts. This sequence ensures that technology is used appropriately to support mitigation, preparedness, response, and recovery activities in a coordinated manner.

76. (B) The underlying hardware, software, networks, and data centers that enable ICT functions.
Computing infrastructure provides the essential framework for all digital disaster management activities. It consists of the physical hardware, software applications, communication networks, and data centers that allow for the processing, storage, and sharing of information. Without this foundation, tools like early warning systems or GIS would be unable to function. It is the "backbone" of disaster informatics, ensuring that data from various sources can be integrated and used by decision-makers and responders across the entire lifecycle of an emergency event.

77. (D) Statement I is false, but Statement II is true.
Deploying a sensor system is an ongoing process rather than a one-time activity. For these systems to remain effective, they require regular maintenance, calibration, and continuous monitoring to ensure data accuracy and reliability. Efficient use also involves the expert interpretation of the collected data to inform decision-making. Neglecting these requirements can lead to system failure or false readings, which are dangerous during critical disaster events. Success depends on a long-term commitment to managing the technology and its output effectively throughout its operational life.

78. (B) Monitoring and analyzing public posts to get a real-time picture of conditions, damages, and needs.
Social media provides a unique opportunity for real-time situational awareness by allowing authorities to monitor user-generated content during a disaster. By analyzing public posts, emergency managers can identify areas of significant damage, locate people needing assistance, and understand the immediate needs of the population. This "crowdsourced" information fills gaps in official data and provides a more comprehensive view of the situation on the ground. Effective use involves filtering this information to identify actionable reports while acknowledging the potential for misinformation.

79. (A) Mitigate risks to human life.
Using robots to inspect hazardous environments, such as a damaged nuclear power plant, is a strategic application of technology to protect human responders. Robots can navigate areas with high radiation levels or structural instability that would be lethal to people. By performing these tasks, they provide essential information about the state of the facility without endangering lives. This application highlights the primary goal of robotics in disaster management: to replace humans in tasks that pose extreme risks while still obtaining critical situational data.

80. (B) The potential for damage to the sensors and the supporting computing infrastructure.
A significant challenge in using technology in disaster zones is the physical vulnerability of the equipment itself. Sensors and the infrastructure needed to transmit and process their data can be damaged by the very hazards they are meant to monitor, such as seismic shocks or flooding. This potential for system failure requires responders to build redundancy and resilience

Downloaded from www.pdf.tube

into their networks. Ensuring that technology remains operational in degraded environments is essential for providing reliable data during search and rescue operations when information is most critical.

81. (A) Both A and R are true and R is the correct explanation of A.
Integrating real-time sensor data into a Decision Support System (DSS) enhances disaster mitigation by providing managers with evidence-based insights. A DSS can automatically compare incoming measurements against established risk models to identify threats and recommend specific actions. This automated analysis allows for faster and more accurate decision-making than manual processes. The assertion and reason correctly explain how the combination of data acquisition and analytical modeling creates a powerful tool for reducing risks and managing emergencies more effectively through technological integration.

82. (A) An interactive website with animations on family preparedness.
A multimedia educational application combines multiple formats, such as text, animation, and interactivity, to enhance learning and engagement. An interactive website with animations is a prime example, as it allows users to explore preparedness topics in a dynamic way. This approach is more effective than traditional text-heavy manuals for reaching a diverse public and encouraging them to take proactive safety steps. By making risk reduction information accessible and engaging, these applications help build community resilience and improve overall disaster preparedness before a crisis occurs.

83. (C) To provide a structured way to store, retrieve, and manage large amounts of critical data.
Database management systems are essential for handling the massive volume of information generated during disaster management, such as records of affected persons, relief inventory, and damage reports. They provide a structured framework that ensures data integrity and allows for rapid querying and reporting. This organization is critical for avoiding duplicate efforts and ensuring that resources are distributed efficiently. By providing a "single source of truth," these systems support more coordinated and effective decision-making across all agencies involved in the disaster response and recovery process.

84. (A) P-3, Q-4, R-1, S-2
Different ICT tools are specialized for use in specific phases of the disaster management cycle. Risk modeling software is primarily used in the mitigation phase to understand long-term threats. Mass notification systems are critical for preparedness, ensuring communities can be warned. Damage assessment apps provide real-time data during the response phase, while debris management software is essential for organizing cleanup during recovery. Matching tools to their appropriate phases ensures that technology is applied strategically to address the unique challenges of each stage of disaster management.

85. (C) The 'veracity' problem, where data can be inaccurate, incomplete, or deliberately misleading.
While Big Data provides vast amounts of information, its "veracity" remains a major limitation. Data from unverified sources like social media can be inaccurate or intentionally misleading, which can hinder decision-making during a crisis. Managing this "noise" requires sophisticated analytical tools and critical human oversight to ensure that the insights derived are reliable. Addressing issues of data quality and trustworthiness is essential for maintaining the effectiveness of Big Data applications and ensuring that they lead to safe and appropriate actions in disaster management.

NODIA

86. (B) Using the collected data effectively to inform decisions and trigger actions.
The efficient use of sensor technology is defined by the impact of the data on decision-making, rather than the quantity of sensors deployed. It involves ensuring that measurements are accurately interpreted and used to trigger timely warnings or response actions. Data that is collected but not analyzed or shared is of little value. True efficiency requires integrating sensor systems into broader management frameworks where they can provide actionable insights, ensuring that the investment in technology leads to a measurable reduction in disaster risks.

87. (A) 1, 2, and 4 only

Valid practices for sensor network deployment include placing instruments in representative locations, ensuring redundant communication pathways, and having a comprehensive plan for data management and maintenance. Ignoring power requirements would lead to system failure, making it an incorrect practice. Robust design ensures that the network remains operational during hazards and provides reliable data for monitoring risks. A focus on data analysis and system longevity is essential for ensuring that the investment in sensor technology contributes effectively to long-term environmental monitoring and early warning systems.

88. (A) To automatically identify and count features of interest, such as damaged homes or people needing rescue.
Artificial intelligence enhances the utility of UAV data by automating the visual analysis process. AI algorithms can be trained to scan large volumes of aerial imagery to identify and count features like collapsed buildings or individuals needing assistance far faster than human analysts. This automation is critical for rapid situational awareness during large-scale disasters. By providing quick and accurate estimations of damage and needs, AI allows emergency managers to prioritize their response and allocate resources more effectively based on the objective visual evidence collected by UAVs.

89. (C) The use of emerging technologies for community-led recovery.
Social media apps provide accessible platforms for communities to self-organize and manage their own recovery efforts after a disaster. Coordinating cleanups or sharing local needs through these digital tools empowers residents to act independently of formal government structures. This community-led approach leverages the widespread availability of mobile technology to foster local resilience and mutual aid. It highlights how ICT can support decentralized, bottom-up recovery activities, complementing official response efforts and ensuring that local needs are addressed through familiar and accessible communication channels.

90. (B) 3, 1, 4, 2
Deploying a sensor-based warning system follows a logical progression from design to operation. It starts with a site survey and network design to ensure optimal coverage. Next, the sensors are installed and connected to the necessary computing infrastructure. The entire system must then be tested and calibrated to ensure accuracy. Finally, once operational, the system can disseminate warnings to the public when monitored thresholds are breached. This structured approach ensures that the system is technically sound and provides reliable alerts that can save lives during hazard events.

91. (D) Tracking resource allocation and managing aid distribution.
In the recovery phase, the primary focus shifts to rebuilding and supporting affected populations. ICT is most effectively used here for logistics and administrative support, such as tracking the allocation of resources and managing the distribution of aid to ensure it reaches those in need. This data-driven approach helps avoid duplication and ensures transparency. While long-term policy development is important, the immediate administrative management of recovery activities relies on robust database and tracking systems to coordinate complex relief efforts across multiple agencies and communities.

92. (D) Statement I is false, but Statement II is true.
While robots are valuable tools in search and rescue, they are intended to complement rather than replace specialized teams like search dogs, which have unique sensory capabilities. A major benefit of robots is their ability to carry diverse payloads, such as high-resolution cameras and gas detectors, into hazardous environments. This allows rescuers to assess conditions and locate victims without endangering themselves. Robots provide a technological advantage in visibility and environmental monitoring, making them essential for safely exploring unstable or toxic areas during the initial response phase of a disaster.

93. (1, 2, and 3 only)
Utilizing emerging technologies like AI and Big Data introduces several challenges, including the need for significant financial investment and technical expertise. Furthermore, these tools raise critical ethical concerns regarding data privacy and potential algorithmic bias. Over-reliance on technology without human oversight

Click Here to Buy book on Amazon

but they face significant technical limitations. Factors such as battery life and weather conditions, like high winds or heavy rain, can restrict their deployment and flight time. Additionally, operators must navigate complex airspace regulations. Assuming that UAVs can operate without limits is a misconception. Effective deployment requires careful planning that accounts for these constraints to ensure that the technology can provide useful data while remaining safe and compliant with local laws.

68. (D) Disaster mitigation
Analyzing historical data and modeling future scenarios to inform infrastructure projects, like sea walls, is a core activity in disaster mitigation. This process uses ICT to understand long-term risks and design physical interventions that reduce the impact of future events. Mitigation focuses on pre-disaster actions that build resilience and lower vulnerability. By leveraging predictive models, authorities can make informed decisions about how to protect communities from climate-related hazards, ensuring that investments are based on a scientific understanding of potential threats and their consequences.

69. (B) P-3, Q-1, R-4, S-2
Each emerging technology presents unique challenges that must be managed for effective disaster management. Social media is highly susceptible to the spread of misinformation, while Big Data raises concerns about privacy and security. Unmanned Aerial Vehicles are limited by battery life and complex airspace regulations. Artificial Intelligence introduces ethical considerations and the risk of algorithmic bias in decision-making. Matching these challenges to their respective technologies is essential for developing robust policies and practices that maximize the benefits of modern ICT while minimizing its potential risks.

70. (B) Scalable high-performance servers and specialized data software.
Big Data analytics requires a sophisticated computing infrastructure capable of processing and storing massive, complex datasets. This includes high-performance servers that can scale as data volume increases and specialized software for data integration and analysis. Basic desktop computers or unconnected devices lack the power needed to handle the variety and velocity of Big Data. A robust infrastructure ensures that information from multiple sources can be synthesized quickly to provide actionable insights for disaster risk reduction and situational awareness during large-scale emergencies.

71. (D) Political polling systems for election forecasting.
Sensor systems in disaster risk reduction are designed to monitor physical and environmental properties related to hazards. Examples include seismic sensors for earthquakes, weather stations for storms, and GPS for ground movement. These technical tools provide the objective data needed for early warnings and risk assessment. Political polling, while a form of data collection, is not a sensor system and is irrelevant to monitoring natural or environmental hazards. Disaster-related sensors focus exclusively on measuring phenomena that directly inform emergency management and community safety.

NODIA

72. (B) 1, 2, and 5 only
The changing media environment leverages ICT to enhance disaster communication through citizen journalism and interactive platforms. Official agencies can use social media to share verified information, counter rumors, and engage in two-way communication with the public. This interactivity allows for feedback and public queries, improving situational awareness. Traditional media like radio remain important for reaching broad audiences, and information flow has actually increased in speed. Understanding these dynamics allows disaster managers to use the full range of modern and traditional communication channels effectively.

73. (C) Increase awareness and knowledge of hazards and protective actions in an engaging way.
Multimedia educational applications use interactive elements, graphics, and video to make risk reduction information more engaging and memorable. The primary goal is to educate the public about hazards and the specific actions they can take to protect themselves. By using interactive formats, these tools can reach a wider audience and foster a deeper understanding of safety procedures than traditional text-based materials. This proactive education is a key component of disaster preparedness, empowering

fast-moving needs of disaster risk reduction, from early warning to long-term recovery and resource management.

100. (D) A way to use technology to analyze complex information and evaluate different risk reduction options.
ICT for decision support in disaster mitigation focuses on using computational tools to analyze diverse datasets and model potential outcomes. This allows managers to evaluate different risk reduction strategies, such as building locations or infrastructure types, based on scientific evidence. Rather than replacing human judgment, these systems provide the insights needed to make informed choices that build long-term resilience. By simulating hazards and their impacts, authorities can identify the most effective interventions, ensuring that resources are used strategically to minimize the consequences of future disasters.

101. (A) The integration of data, information, and knowledge to support decision-making in all phases of a disaster.
Disaster informatics is a comprehensive field focused on how information is managed and utilized throughout the entire disaster lifecycle. It involves integrating data from various sources to create a unified understanding that supports effective decision-making. This interdisciplinary approach combines technology, information science, and emergency management to improve situational awareness and operational outcomes. By focusing on the flow of information, from initial data collection to long-term archiving, disaster informatics ensures that evidence-based insights are used to mitigate risks, prepare for emergencies, and coordinate successful response and recovery efforts.

102. (A) Ensuring alerts can effectively reach and be understood by diverse populations, including those with disabilities.
A major future challenge for alerting technologies is ensuring inclusivity and accessibility for all individuals. This means designing systems that can reach people with different technological access, as well as those with visual or hearing impairments. Effective alerts must be consistent, understandable, and actionable across diverse demographic groups. Overcoming the digital divide and language barriers is essential for ensuring that no one is left behind during a crisis. Future developments must prioritize multi-modal and targeted communication strategies that ensure universal reach and understanding in emergency situations.

103. (A) 1, 3, and 4 only
Different sensor types provide specialized data essential for disaster management. Acoustic sensors help find survivors, chemical sensors detect hazardous leaks, and thermal sensors identify heat signatures. These are all critical applications. The claim that optical sensors like cameras are useless is incorrect, as they are fundamental for situational awareness and damage assessment. By using a combination of these sensors, responders can gain a more comprehensive understanding of hazards and survivor locations, significantly improving the safety and effectiveness of search and rescue and emergency operations in unstable environments.

104. (D) Providing on-demand, scalable computing resources without the need for large local server farms.
Cloud computing offers significant advantages for disaster management by providing scalable, on-demand processing power and storage. This allows agencies to handle massive increases in data during a crisis without investing in extensive local infrastructure. It also facilitates remote access to information, which is critical if local facilities are damaged. By leveraging the cloud, disaster managers can ensure that their information systems are resilient and can grow to meet the needs of any emergency, providing a cost-effective and flexible foundation for modern disaster risk reduction.

105. (B) Proactive resource deployment and evacuation planning.
Using AI models to predict the spread of a wildfire allows authorities to take proactive measures before the hazard reaches populated areas. By understanding the likely path and intensity, managers can plan evacuations and deploy firefighting resources more effectively. This application of predictive technology is a key part of the preparedness and early response phases, helping to minimize the impact of the disaster. By using data-driven insights to stay

Downloaded from www.pdf.tube

ahead of the hazard, agencies can save lives and protect property through more targeted and timely interventions.

106. (A) Both A and R are true and R is the correct explanation of A.
Sensor systems are not self-sustaining and require continuous human involvement to remain effective. Regular maintenance, power management, and calibration are necessary to ensure the sensors provide accurate and reliable data. Furthermore, the information they generate must be constantly analyzed and interpreted by experts to be useful for decision-making. The assertion and reason correctly highlight that technology is a tool that requires ongoing management rather than a one-time solution. Success in disaster risk reduction depends on this long-term commitment to maintaining and utilizing technological systems correctly.

107. (B) Many current robots have difficulty navigating complex, unstructured, and unpredictable rubble.
While robotics technology is advancing, navigating the highly unstable and unstructured environment of a disaster zone remains a major challenge. Rubble from collapsed buildings is unpredictable and difficult for current locomotion systems to cross. This limitation means that robots cannot yet fully replace human or canine search teams in all scenarios. Overcoming these mobility issues is a primary focus of research in disaster robotics. Until robots can more effectively navigate complex ruins, their role will primarily be to provide supplemental data and explore voids that are too dangerous for traditional rescuers.

108. (B) Using simulation software to determine the potential impact of a new dyke on flood levels.
Using simulation software to model the impact of infrastructure projects is a prime example of ICT for decision support in mitigation. This allows planners to evaluate the effectiveness of different options, like a new dyke, before construction begins. By understanding how a project will affect future flood levels, authorities can make informed decisions that maximize risk reduction. This data-driven approach ensures that mitigation investments are based on a scientific understanding of potential outcomes, helping to build more resilient communities through evidence-based planning and long-term hazard management.

109. (B) P-4, Q-3, R-1, S-2
Social media facilitates several distinct functions in disaster management through different types of user actions. Personal check-ins help families ensure safety, while posts about damage contribute to situational awareness and assessment for agencies. Official accounts provide verified communication to the public, and group coordination enables community self-organization for recovery. Understanding these various roles allows disaster managers to engage with social media more effectively, using it as a multi-functional tool for information gathering, public relations, and community support across all phases of an emergency event.

110. (C) The data from sensors is always self-explanatory and requires no expert interpretation.
While sensor technologies provide essential quantitative data for disaster risk reduction, this information is rarely self-explanatory. Professional interpretation is required to understand what the measurements mean in terms of hazard levels and risks. For example, a seismic reading or a change in gas levels must be analyzed by experts to determine if it indicates an impending disaster. Assuming that data is automatically understood without specialized knowledge is incorrect and can lead to dangerous misinterpretations. Effective use depends on combining technology with expert analysis for accurate forecasting.

111. (D) Automatically and rapidly extract actionable information for situational awareness.
During a major flood, the volume of visual content shared on social media is too large for manual review. Machine learning algorithms are used to scan these photos and videos to identify critical features, such as flooded roads or stranded people. This automation allows for the rapid extraction of actionable information, providing emergency managers with immediate situational awareness. By processing large amounts of unstructured data quickly, AI helps authorities understand the extent of the disaster and prioritize their response efforts based on the most current visual evidence from the field.

NODIA

112. (B) 2, 3, and 4 only
Efficient deployment of ICT focuses on building the capacity of users and ensuring that systems are interoperable and resilient. Technology must be robust enough to function in degraded disaster conditions and be understandable to those using it on the ground. Prioritizing complexity over context or assuming only national governments have a role are incorrect practices. Successful deployment involves a collaborative approach where local and national agencies use compatible, user-friendly tools that are supported by thorough training, ensuring that technology effectively supports real-world emergency management and communication needs.

113. (B) To conduct rapid and safe visual assessment of damage to critical infrastructure like bridges and dams.
In the immediate aftermath of an earthquake, quickly assessing the integrity of critical infrastructure is vital for public safety. UAVs provide a safe and efficient way to conduct visual inspections of structures like bridges and dams that may be unstable or difficult to reach. This rapid assessment allows authorities to identify hazards and prioritize repairs or closures. By providing high-resolution aerial views without endangering human inspectors, UAVs significantly improve situational awareness and help prevent secondary disasters by ensuring that damaged infrastructure is identified and managed promptly.

114. (B) It can lead to the exclusion of vulnerable groups who lack access to or proficiency with modern technology.
The "digital divide" refers to the gap between those with access to modern ICT and those without. In disaster communication, this divide can leave elderly, low-income, or rural populations without life-saving information if alerts are only sent via digital channels. This exclusion increases the vulnerability of groups who may already be at higher risk. To ensure effective communication for all, disaster managers must use diverse channels that do not rely solely on internet or smartphone access, providing inclusive and equitable warning systems for the entire community.

115. (A) 4, 1, 3, 2
Using AI for post-disaster imagery analysis follows a structured process, beginning with the long-term task of training models on labeled datasets. When a disaster occurs, images are captured by UAVs or satellites and then processed by these pre-trained models to detect damage. The resulting insights are used to prioritize search and rescue or assessment efforts. This sequence ensures that the technology is ready before an event and can provide rapid, actionable information when time is critical, demonstrating how AI can effectively augment human analysis in emergencies.

116. (B) It helps avoid duplicate efforts and ensures aid is distributed more equitably.
A centralized database management system provides a unified record of relief activities, allowing multiple agencies to see what aid has been provided and where gaps remain. This "single source of truth" is essential for avoiding the duplication of efforts and ensuring that resources are distributed fairly across the affected population. By coordinating information in a structured way, disaster managers can improve the efficiency and transparency of relief operations, leading to better outcomes for survivors and a more organized recovery process for all involved stakeholders.

117. (D) Statement I is false, but Statement II is true.
Social media is not a fully reliable or officially verified source of information on its own, as it is prone to rumors and misinformation. However, it is an invaluable tool for emergency managers to identify unmet needs and locate survivors by monitoring public conversations. While it cannot replace official communication, it provides "crowdsourced" situational awareness that can fill gaps in formal reports. Effective use requires a critical approach where information is filtered and verified before being used to guide response actions, balancing its speed with the need for accuracy.

118. (C) Acoustic sensors can be hampered by high levels of ambient noise in a chaotic post-disaster environment.
Acoustic sensors are designed to detect faint sounds, but their effectiveness can be significantly reduced in noisy environments. The sounds of heavy machinery, helicopters, or general chaos in

Click Here to Buy book on Amazon

raises ethical concerns about algorithmic bias, while Big Data involves significant privacy and ownership issues. Social media faces the "signal vs. noise" problem due to the high volume of unverified information. Robotics are challenged by the difficulty of physical mobility in unstructured ruins. Matching these challenges to their respective technologies is essential for developing effective policies and operational practices that maximize the benefits of modern ICT while minimizing potential risks.

170. (D) Using social media to track celebrity gossip.
Sensor technologies in emergency operations are used for critical safety and search tasks, such as finding survivors with thermal or acoustic sensors and detecting hazardous materials with chemical sensors. These technical applications directly support life-saving missions. Tracking celebrity gossip on social media, while a use of technology, is entirely irrelevant to disaster management and provides no value for risk reduction or search and rescue. The focus of disaster-related technology is on gathering and analyzing information that informs response actions and protects both survivors and responders in hazardous environments.

171. (B) Identify complex patterns and correlations in data that are not apparent to humans.
AI and machine learning offer the unique capability to process vast and complex datasets to uncover hidden patterns and correlations. This allows for more sophisticated risk assessments and hazard predictions than human analysis alone could achieve. For example, AI can identify subtle precursors to earthquakes or landslides in historical data. By providing these deeper insights, AI enhances the overall understanding of risks and supports more effective long-term mitigation and preparedness strategies. Technology here augments human intelligence, providing a more scientific and evidence-based foundation for managing complex environmental hazards.

172. (B) 2, 3, and 5 only
ICT plays several critical roles in disaster communication, including the rapid dissemination of warnings, tracking of misinformation, and coordination between agencies. These functions ensure that the right information reaches the public and responders. While one-way broadcasts have limited use, modern ICT emphasizes interactive and multi-directional flow. Citizen journalism also has a major impact on situational awareness. Understanding these roles allows disaster managers to use digital platforms effectively to manage information and maintain public trust, leading to more coordinated and successful responses across different organizations and communities.

173. (B) Ensure the network has redundancy in both power and communication.
Designing a robust sensor network requires building in redundancy to ensure that data collection and transmission continue even if parts of the system are compromised. This includes having multiple power sources, like solar with battery backup, and redundant communication paths, such as satellite and cellular links. Placing sensors at a single point or ignoring power needs would create a "single point of failure," making the system unreliable during a disaster. Resilient design ensures that the network provides a continuous flow of critical data for early warnings and environmental monitoring.

NODIA

174. (D) ICT for coordination and decision support.
Shared online portals facilitate better coordination among diverse organizations by providing a common platform for updating relief activities. This visibility allows agencies to see where aid is already being provided and where gaps remain, preventing the duplication of efforts and ensuring resources are used efficiently. This is a classic application of ICT for decision support and coordination, as it provides the information needed to manage complex logistics and administrative tasks. By fostering collaboration, these tools improve the overall effectiveness and equity of the disaster response and recovery process.

175. (A) 2, 3, 4, 1
The development of communication technology in disaster management follows a clear chronological progression. It began with the electric telegraph for basic messaging. This was followed by the rise of broadcast radio for wide reach. The development of geostationary communication satellites later enabled global connectivity. Most recently, internet-based social

ensures that technology is used strategically to address the diverse information needs of both authorities and the public across the entire disaster lifecycle.

125. (D) Vanishing (data that disappears immediately after being created).
Big Data is characterized by the "Vs," which include Volume, Velocity, and Variety. These refer to the large amount, high speed, and diverse types of data generated, respectively. "Vanishing" is not a characteristic; in fact, long-term archiving for research is a key part of disaster informatics. Managing the scale and complexity of these datasets requires specialized infrastructure and analysis techniques. Understanding these characteristics helps disaster managers design systems that can effectively process and store critical information for both immediate response and future risk reduction and planning.

126. (A) High-quality, relevant historical data for training.
Machine learning models rely on patterns found in historical data to make future predictions. A primary challenge in disaster management is the availability of high-quality, labeled datasets that accurately reflect past events. If the training data is biased, incomplete, or inaccurate, the model's predictions will be unreliable. Building these robust datasets requires significant effort in data collection and cleaning. The performance of AI in predicting hazards or assessing damage is directly tied to the quality of this underlying information, highlighting the importance of data management.

127. (C) 2, 3, and 4 only
ICT is a critical component of modern disaster management across all phases and is relevant for all countries, not just technologically advanced ones. Effective use requires a socio-technical approach that considers both the technology and the people using it. Key goals include improving coordination among agencies and enhancing situational awareness. By integrating diverse digital tools, authorities can better manage risks, prepare for emergencies, and coordinate more efficient responses. Technology serves as an enabler for a more organized and data-driven approach to reducing disaster impacts globally.

128. (C) An ICT application for decision support.
Software that integrates diverse real-time data feeds onto a single common operational picture is a prime example of an ICT application for decision support. By visualizing weather, sensor data, and resource locations together, it allows emergency managers to see the "big picture" and make more informed decisions during a crisis. This integration reduces confusion and helps prioritize actions based on the current situation. Such systems are central to modern Emergency Operations Centers, providing the analytical foundation needed for coordinated and effective disaster response and resource management.

129. (C) UAVs with thermal cameras and GPS for rescuers.
Searching for missing persons in large, forested areas requires specialized tools for visibility and coordination. UAVs with thermal cameras can detect heat signatures through dense foliage, helping to locate individuals from the air. Simultaneously, GPS ensures that ground rescuers can navigate accurately and be tracked by their command center. This combination provides a powerful and efficient search capability that traditional ground-based methods alone lack. By integrating aerial reconnaissance with precision ground navigation, search and rescue teams can cover large areas more quickly and safely.

NODIA

130. (A) 2, 3, 1, 4
The data lifecycle in disaster informatics follows a logical flow from acquisition to long-term learning. It begins with data collection from diverse sources like sensors and social media. This information is then analyzed, integrated, and visualized to provide insights. These insights support data-driven decision-making during the disaster. Finally, the data is archived for long-term research and to inform future risk reduction strategies. This cycle ensures that information is used effectively during an event and contributes to a continuous improvement in disaster management practices and knowledge.

131. (A) Support long-term risk reduction activities.
In the mitigation phase, ICT is used to identify and reduce long-term vulnerabilities through informed planning and infrastructure improvements. This involves using tools like GIS and risk modeling to understand hazards

specialized sensors can significantly enhance the effectiveness and safety of emergency operations in unstable or collapsed structures.

157. (A) 1, 2, and 4 only
Future solutions for alerting technologies involve creating more integrated, accessible, and standardized systems. This includes using a combination of delivery paths like cell broadcast and traditional sirens, and ensuring alerts are available in multiple languages with accessibility features for those with disabilities. Standardized protocols like CAP are essential for ensuring that different systems can work together. Solutions should prioritize reach and clarity for all populations, including those without smartphones, rather than increasing complexity or ignoring vulnerable groups, ensuring that life-saving warnings are inclusive and effective for everyone.

158. (B) It provides a 'single source of truth', reducing confusion from conflicting reports.
A well-managed database serves as a "single source of truth" by consolidating information from various agencies into a unified, accurate record. This reduces the confusion that can arise from conflicting reports during a chaotic disaster response. By ensuring that everyone is working from the same verified data, disaster managers can improve coordination and decision-making. While it does not guarantee data immunity from physical destruction, it provides a structured framework that enhances the reliability and transparency of information across all relief and recovery efforts, leading to more efficient operations.

159. (B) A task that is too dangerous and difficult for humans.
Using specialized robots, like snake-like machines with cameras, allows search and rescue teams to explore small and unstable voids in collapsed buildings that would be impossible or lethal for human rescuers. This application directly addresses the physical challenges of search operations in ruins. By performing these dangerous tasks, robots provide visual confirmation of survivors and help assess the stability of debris without risking additional lives. This highlights the primary role of robotics in emergency response: providing capabilities that extend the reach and safety of human responders in high-risk environments.

160. (A) 4, 2, 3, 1
The evolution of remote disaster assessment has progressed from early text-based reports to sophisticated, high-resolution imagery. It began with the use of telegraphs and radio for initial descriptions. This was followed by aerial photography from manned aircraft. Later, real-time satellite feeds provided a broader environmental perspective. Most recently, UAVs have enabled the acquisition of on-demand, extremely high-resolution imagery for specific locations. This chronological development reflects the increasing speed and precision of the information available to disaster managers, allowing for more detailed and timely assessments of impact and needs.

161. (A) Decision Support System for mitigation.
An ICT tool that analyzes factors like soil type and building codes to generate a risk score is a classic decision support system used in the mitigation phase. It synthesizes complex data to provide insights into potential vulnerabilities, helping authorities prioritize long-term risk reduction efforts. By identifying high-risk areas before a disaster occurs, this information allows for better planning and more effective interventions, such as targeted building retrofitting or updated land-use regulations. This proactive use of technology is essential for building community resilience and minimizing the impact of future seismic events.

162. (D) Statement I is false, but Statement II is true.
Big Data analytics in disaster management is not limited to social media; it involves integrating and analyzing a wide variety of datasets, including sensor readings, satellite imagery, and logistical information. By synthesizing these diverse streams of data, authorities can gain a much more comprehensive understanding of risks and disaster impacts. This multi-source analysis is essential for identifying patterns and trends that would be invisible in smaller datasets. Effective use of Big Data requires leveraging its full range of sources to improve situational awareness and strategic decision-making across all phases.

163. (C) 1, 2, and 3 only

Downloaded from www.pdf.tube

immediately, minimizing confusion during high-stress emergency situations.

138. (B) A Machine Learning application for prediction.
Forecasting aftershocks by analyzing historical seismic data is a classic application of machine learning. ML algorithms can identify complex patterns in vast datasets that humans might miss, allowing for more accurate probabilistic judgments about future events. This predictive capability helps authorities understand ongoing risks and adjust their response and recovery plans accordingly. By using data to model future hazards, ML provides a powerful tool for proactive risk assessment, helping to minimize the impact of secondary disasters and improve the overall safety of affected populations in unstable seismic zones.

139. (B) P-3, Q-2, R-1, S-4
Every disaster management technology has specific limitations that must be addressed during planning. UAVs are constrained by battery life and weather, while social media is prone to rumors. Satellite imagery can be obscured by clouds, and ground sensors are vulnerable to being destroyed by the very hazards they monitor. Recognizing these limitations allows disaster managers to build redundancy and use a combination of technologies to ensure continuous and reliable information flow. Effective strategy involves balancing the strengths and weaknesses of different tools to create a more resilient and comprehensive information framework.

140. (D) An interactive mobile app that simulates safety steps through a game.
Multimedia educational applications use interactivity and multiple formats to make learning about disaster safety engaging and effective. An interactive mobile app that uses gamification is a prime example, as it allows users to practice safe behaviors in a simulated environment. This active learning approach is superior to passive methods for building knowledge and muscle memory. By reaching people through familiar digital platforms, these applications help increase public awareness and preparedness, empowering individuals to take appropriate protective actions when a real disaster occurs in their community.

141. (C) Using a walkie-talkie to direct a fire truck to an incident.
ICT for decision support in mitigation focuses on using data analysis and modeling to inform long-term planning and risk reduction, such as GIS mapping or cost-benefit analysis of infrastructure. These activities occur before a disaster to minimize its future impact. Using a walkie-talkie for tactical direction during a fire is an example of communication during the response phase, not decision support for mitigation. Understanding the distinction between these phases is essential for applying technology strategically to address either immediate operational needs or long-term strategic planning for community resilience.

142. (A) 1, 3, and 5 only
Robotics in disaster management have several critical applications, including inspecting underwater infrastructure, exploring voids in collapsed buildings for survivors, and carrying sensors into toxic environments. These tasks utilize the robots' ability to operate in areas too dangerous for humans. They are not typically used for psychological aid and are rarely fully autonomous, requiring expert operators. The focus is on search, rescue, and hazardous inspection, providing capabilities that enhance safety and visibility in unstable disaster zones. These applications demonstrate how robotics specifically address physical challenges in emergency operations.

143. (B) An evidence-based, data-driven approach to managing the entire disaster lifecycle.
Disaster informatics promotes a comprehensive and integrated approach to managing information across all phases of a disaster. By focusing on data-driven decision-making, it moves management away from fragmented or anecdotal methods toward an evidence-based framework. This interdisciplinary field ensures that information is collected, processed, and utilized effectively to mitigate risks, prepare for emergencies, and coordinate response and recovery. The primary benefit is a more organized and scientific approach to disaster management that leverages the full power of information technology to save lives and build resilience.

144. (B) Engage in two-way communication and actively monitor online conversations.

NODIA

In the changing media environment, disaster managers can no longer rely on one-way broadcasts. They must actively engage with the public through digital platforms, monitoring conversations to gain situational awareness and responding to queries to maintain trust. This two-way communication allows authorities to provide verified information and counter rumors in real-time. By participating in the multi-directional flow of information, agencies can reach people more effectively and foster a more collaborative and responsive approach to disaster communication, ensuring that official messages are heard and understood by the public.

145. (A) 2, 3, 4, 1
Information flow on social media during a disaster typically begins with an event witnessed by the public. Citizens then post content, which spreads rapidly through digital networks. Official agencies later intervene to confirm or debunk this information. This sequence highlights the speed of crowdsourced data and the critical role of authorities in verifying it. Understanding this flow allows disaster managers to monitor platforms for early reports and provides a framework for managing public perception and situational awareness through rapid and targeted official communication during emergency events.

146. (C) That it should be portable, rugged, and quick to deploy.
Sensor systems for emergency and rescue must be designed for use in harsh, unstable environments. They need to be portable so they can be easily carried to incident sites, rugged enough to withstand physical stress, and quick to deploy to provide immediate data. Complexity or lack of mobility are significant disadvantages in a rapid response scenario. The focus on durability and ease of use ensures that the technology can function effectively under pressure and provide the critical situational data needed to locate survivors and assess hazards during rescue missions.

147. (D) Statement I is false, but Statement II is true.
UAVs are versatile platforms that can carry a variety of sensors beyond traditional cameras. Payloads like thermal cameras, LiDAR for mapping, and gas sensors for environmental monitoring allow them to collect diverse types of data for different disaster needs. This versatility makes them valuable across many phases of disaster management, from risk assessment to search and rescue. Recognizing the full range of UAV capabilities is essential for utilizing them effectively as multi-functional tools that can provide comprehensive situational awareness and technical data in various disaster contexts.

148. (B) 1, 2, and 3 only
Utilizing sensor technologies in disaster risk reduction involves several challenges, including high costs, the risk of data disruption during events, and the difficulty of managing the resulting "data deluge." Sensors are not infallible and can provide inaccurate data or fail entirely. Effective management requires addressing these technical and financial hurdles to ensure that the system provides reliable and actionable information. Balancing the benefits of continuous monitoring with the practical limitations of the technology is essential for designing robust and sustainable early warning and environmental monitoring systems for long-term disaster management.

149. (B) Using multiple channels to send simple alerts to targeted groups.
Efficient disaster communication focuses on ensuring that clear and actionable information reaches the right people at the right time. Using multiple channels, such as SMS, social media, and local broadcasts, provides redundancy and increases the likelihood that alerts will be received. Targeting specific groups ensures that the information is relevant to those most at risk, reducing public confusion. This multi-modal and targeted approach is far more effective than long technical reports or delayed official statements, demonstrating the strategic use of ICT to save lives through effective public messaging.

150. (B) To analyze insurance claims, aid distribution patterns, and reconstruction progress to identify gaps and inefficiencies.
In the recovery phase, Big Data analytics is used to manage the complex logistics of rebuilding and relief. By analyzing large datasets related to claims and aid, authorities can identify areas that are being overlooked or where resources are being misused. This data-driven oversight ensures that recovery efforts are equitable and efficient.

Click Here to Buy book on Amazon

While prediction is important in earlier phases, the focus during recovery is on administrative transparency and optimization, using technology to track progress and ensure that long-term rebuilding efforts meet the needs of the affected population effectively.

151. (A) Both A and R are true and R is the correct explanation of A.
Artificial intelligence significantly speeds up damage assessment by automating the analysis of aerial and satellite imagery. Machine learning models can be trained to recognize features like destroyed buildings or flood extent, allowing for much faster processing than human analysts can achieve. This rapid situational awareness is essential for prioritizing relief efforts and allocating resources in the immediate aftermath of a large-scale disaster. The assertion and reason correctly explain how AI's analytical power directly addresses the need for speed and scale in processing information during critical emergency response operations.

152. (C) Using public opinion polls to decide on a new national policy.
Sensor technologies in disaster risk reduction are used to measure physical environmental properties, such as seismic activity, water levels, and ground deformation. These technical tools provide the data needed for early warnings and hazard monitoring. Public opinion polling, while a form of information gathering, is not a sensor-based technology and does not measure physical phenomena related to disasters. The application of sensors is focused on objective measurements that directly inform hazard assessment and public safety actions, providing a scientific foundation for emergency management and long-term risk reduction.

153. (C) Collecting information, such as damage reports or locations of people needing help, from a large group of people.
Crowdsourcing on social media involves leveraging the public as a network of sensors to collect real-time situational data. During a disaster, this can include reports of road closures, damage to buildings, or specific requests for assistance from stranded individuals. This information fills gaps in official data and provides a more comprehensive view of the situation. Effective crowdsourcing allows disaster managers to harness the collective power of the community to improve situational awareness and coordinate response efforts more effectively, provided the data is filtered and verified for accuracy.

154. (C) P-2, Q-3, R-4, S-1
Different ICT tools are designed to process specific types of data essential for disaster management. GIS handles geospatial data like maps and coordinates, while social media analytics tools process unstructured text and network data from the public. Remote sensing software is used for raster data from satellites or aircraft, and sensor data loggers record time-series physical measurements. Understanding these relationships ensures that the right tools are selected to analyze the diverse information streams required for comprehensive situational awareness, risk assessment, and decision support across all phases of disaster management.

NODIA

155. (B) The overarching strategy for how technology will be used to achieve disaster management objectives.
An ICT approach is not just a single tool but a strategic framework for using technology to meet specific disaster management goals. It involves defining how hardware, software, and information systems will be integrated into operational workflows to improve situational awareness, coordination, and decision-making. This strategic perspective ensures that technology is used purposefully and fits the local context and problem. A well-defined approach guides the selection and deployment of individual tools, ensuring they contribute effectively to the overall mission of reducing disaster risks and saving lives through better information management.

156. (A) Sensor technology for emergency operations.
Ground-penetrating radar used by a rescue robot is a sophisticated application of sensor technology designed for search and rescue. This sensor allows responders to "see" through solid materials to locate survivors or identify hazards in unstable environments. By integrating this capability onto a robotic platform, agencies can conduct search operations in dangerous areas without risking human lives. This targeted use of technical monitoring provides high-value data during the response phase, demonstrating how

a disaster zone can mask the sounds of trapped survivors, making it difficult for the sensors to identify victims. This limitation highlights the need for specialized equipment and quiet periods during search operations. Understanding the constraints of different sensor types is essential for selecting the right tools and using them effectively during emergency and rescue missions in unstable areas.

119. (C) The hydrological characteristics of the river basin.
Designing an effective flood warning system requires a deep understanding of the river's hydrology, including how it responds to rainfall and the areas most prone to surges. Sensors must be placed at strategic points upstream and in critical locations based on these physical characteristics. Aesthetic appearance or proximity to offices are not relevant to the technical success of the system. By aligning the sensor network with the physical behavior of the environment, authorities can ensure that alerts are accurate and provide sufficient lead time for protective actions.

120. (D) Complex datasets that require advanced computational processing techniques.
Big Data in disaster management refers to the massive, diverse, and rapidly generated datasets that exceed the capacity of traditional data processing methods. This includes information from millions of sensors, social media posts, and satellite images. Analyzing this data requires advanced computational techniques, such as machine learning and high-performance computing, to uncover patterns and provide situational awareness. The goal of Big Data is to synthesize this complex information into actionable insights that can improve risk assessment, emergency response, and long-term mitigation strategies across large geographic areas.

121. (A) Both A and R are true and R is the correct explanation of A.
ICT has transformed disaster management into a more proactive discipline by providing tools for risk identification and early warning. Technologies like GIS and predictive modeling allow authorities to understand hazards and plan mitigation strategies long before an event occurs. This move away from purely reactive response saves lives and reduces economic losses. The assertion and reason correctly explain how technological advancement enables agencies to be better prepared and more strategic, shifting the focus to reducing vulnerabilities and managing risks across all phases of the disaster lifecycle.

122. (A) Robots are immune to the effects of hazardous chemicals, unlike human workers.
Robots are ideal for operations in decontamination zones because they are not affected by toxic chemicals that would be lethal or harmful to humans. By using robots for inspection and initial cleanup, agencies can assess the situation and manage risks without endangering responders. This immunity allows for a more immediate and thorough response in hazardous environments. The primary value of robotics here is the preservation of human life while still achieving critical operational goals in unstable or contaminated areas that are too dangerous for traditional search and rescue teams.

123. (C) Store, process, and help analyze the large amounts of video and sensor data collected by the UAV.
While the UAV itself captures data, the underlying computing infrastructure is essential for turning that data into usable information. This includes the storage systems, high-speed networks, and specialized software needed to process and analyze large volumes of video and sensor readings. Without this backend support, the data collected during a mission could not be synthesized or shared with decision-makers. The infrastructure ensures that the visual and technical insights from the UAV are effectively integrated into situational awareness and emergency management workflows.

124. (B) P-2, Q-4, R-1, S-3
Different ICT approaches are designed to achieve specific goals within the disaster management framework. Multimedia education builds risk awareness in an accessible way, while social media monitoring provides real-time situational awareness from the public. Decision support systems use data to inform long-term planning and mitigation, and early warning systems provide the timely alerts needed for protective action. Matching these approaches to their goals

Downloaded from www.pdf.tube

Sensor technologies provide objective, quantifiable, and continuous data from locations that are often dangerous or unreachable for humans. This capability is essential for monitoring environmental risks 24/7 without risking lives. However, these systems are not invulnerable; they are physical devices that require regular maintenance and can be damaged by hazards. Successful monitoring depends on recognizing these technical strengths while planning for maintenance and potential system failure. By using sensors appropriately, disaster managers can build reliable early warning systems based on a scientific understanding of real-time environmental changes and hazard precursors.

164. (C) The high potential for deliberate misinformation and unverified rumors.
While social media is a powerful tool for rapid communication, its greatest limitation is the lack of information verification. During a crisis, rumors and deliberate misinformation can spread quickly, causing public panic and hindering official response efforts. This "noise" can overwhelm the useful information shared by citizens. Disaster managers must actively filter and verify social media content to maintain situational awareness. Addressing the challenge of data veracity is essential for using these platforms effectively as a reliable source of information during the high-stress and chaotic response phase of a disaster.

165. (A) It is like the roads and electrical grid of a city.
Computing infrastructure is the foundational layer that supports all other ICT functions in disaster risk reduction, much like a city's roads and grid support its daily activities. It provides the essential connectivity, processing power, and storage that allow specialized applications like early warning systems or GIS to operate. Without this underlying framework, individual tools would be isolated and ineffective. Infrastructure ensures that data can flow between sources and decision-makers, providing a resilient and scalable backbone for modern information management throughout the entire lifecycle of disaster mitigation and response.

166. (A) Both A and R are true and R is the correct explanation of A.
UAVs are increasingly used for logistics in disaster zones because they can bypass blocked roads to deliver critical, high-value supplies. This includes medicine or communication devices that are essential for isolated communities. By providing a rapid and direct delivery path, UAVs ensure that life-saving items reach those in need when traditional transportation is compromised. The assertion and reason correctly highlight how the aerial mobility of UAVs directly addresses the logistical challenges of reaching disaster-stricken areas, demonstrating a practical and innovative application of technology for emergency relief and community support.

NODIA

167. (C) Gas Sensor - Measuring air pressure for tsunami warnings.
For effective disaster monitoring, sensors must be matched to the specific physical property being measured. Rain gauges measure precipitation, accelerometers measure ground motion, and infrared cameras detect heat. However, gas sensors measure chemical concentrations and are not used for measuring air or water pressure for tsunami warnings, which requires pressure transducers or tide gauges. Using the wrong sensor type would lead to a failure in the early warning system. Understanding the technical function of different sensors is essential for designing accurate and reliable monitoring networks for various environmental hazards.

168. (A) Ensuring the technology is appropriate for the context, problem, and users.
Efficient deployment of ICT focuses on the fit between the technology and the environment in which it will be used. This involves selecting tools that are robust, user-friendly, and address specific operational needs. Technology should not be chosen just because it is expensive or complex, but because it provides reliable solutions for the problems at hand. This approach ensures that personnel can effectively use the tools during a crisis and that the technology integrates into broader management workflows, leading to a more coordinated and successful disaster response.

169. (A) P-2, Q-4, R-1, S-3
Each emerging technology presents distinct challenges that must be addressed for successful disaster risk reduction. Artificial intelligence

and evaluate different protective measures. Mitigation focuses on pre-emptive actions that build resilience before a disaster strikes. By leveraging data to guide land-use decisions and construction standards, authorities can minimize the potential impact of future events. This strategic use of technology is essential for creating safer communities and reducing the long-term economic and social costs of disasters.

132. (D) Statement I is false, but Statement II is true.
The efficiency of a sensor system is not just about its technical specs, but also how it is deployed, maintained, and used in decision-making. A high-spec sensor is useless if it is placed poorly or if its data is ignored. Success requires a holistic approach that includes regular maintenance and the integration of data into operational workflows. Technology is only as effective as the processes and people that support it, highlighting the need for a comprehensive socio-technical strategy in the design and management of disaster monitoring networks.

133. (B) UAVs can fly below cloud cover and provide higher-resolution imagery on demand.
While satellites provide broad coverage, they can be obstructed by cloud cover and have fixed orbits that limit their response time. UAVs offer a key advantage by flying below clouds and providing high-resolution, on-demand imagery for specific areas. This flexibility is essential for rapid assessment in the immediate aftermath of a disaster. UAVs can be deployed quickly and directed to precise locations to provide real-time visual data, making them a powerful complement to satellite-based remote sensing for detailed situational awareness and damage assessment during critical operations.

134. (D) ICT for emergency operations.
Hospital database systems are critical components of emergency operations, allowing for the real-time management of patients and resources during mass casualty events. By tracking intake, bed availability, and supplies, these systems ensure that medical facilities can function effectively under extreme pressure. This data-driven coordination is essential for saving lives and managing complex medical logistics. While not an early warning tool, these databases provide the operational foundation needed for a coordinated healthcare response, demonstrating the vital role of information management in the immediate aftermath of a disaster.

135. (C) The individual's right to privacy.
Using mobile phone location data to monitor evacuations offers valuable insights into public compliance and movement, but it raises significant ethical concerns regarding privacy. Authorities must ensure that this data is anonymized and used responsibly to protect individual rights while still achieving public safety goals. This balance is critical for maintaining public trust in the use of emerging technologies. Ethical frameworks and legal regulations are necessary to guide the use of Big Data in disaster management, ensuring that the benefits of technological insights do not come at the expense of fundamental privacy protections.

136. (A) Both A and R are true and R is the correct explanation of A.
Sensor technologies are foundational to modern early warning systems because they provide the real-time ground-truth data needed to trigger alerts. By measuring physical properties like seismic motion or water levels, these devices provide an objective basis for identifying imminent threats. This rapid data acquisition allows authorities to issue warnings before a hazard reaches populated areas, saving lives. The assertion and reason correctly explain how technical monitoring directly enables proactive risk management, demonstrating the critical link between data acquisition and public safety in contemporary disaster management strategies.

137. (C) Ensuring message consistency and avoiding public confusion when alerts are issued through multiple systems.
As alerting systems become more diverse, maintaining consistency across multiple channels like SMS, sirens, and social media is a major challenge. If messages are conflicting or use different terminology, it can lead to public confusion and a slower response. Standardizing alert protocols and ensuring that all systems broadcast the same verified information is essential for effective communication. Disaster managers must coordinate these multiple delivery paths to provide clear, actionable instructions that the public can trust and follow

Click Here to Buy book on Amazon

media has introduced multi-directional and real-time interactive communication. Each of these steps has significantly increased the speed and volume of information available to disaster managers and the public, transforming how emergencies are communicated and managed globally.

176. (B) They are constrained by factors like battery life, payload capacity, and weather conditions.
UAVs offer powerful aerial reconnaissance capabilities, but they face significant operational limitations. Battery life restricts their flight duration, while payload capacity limits the number of sensors they can carry. Additionally, weather conditions like high winds, rain, or heavy smoke can make flights unsafe or impossible. Operators must account for these constraints during mission planning to ensure that the technology can provide useful data. Understanding these limitations is essential for integrating UAVs effectively into disaster response workflows, ensuring they are used appropriately and safely in challenging environmental conditions.

177. (D) Statement I is false, but Statement II is true.
Storing data in a single, unchangeable file is a poor practice because it lacks the flexibility and organization needed for effective disaster management. A structured database management system is essential, as it allows for efficient querying, updating, and ensuring the integrity of critical information. These systems provide a robust framework for handling large volumes of data related to affected persons, resources, and damages. Proper database management is a cornerstone of disaster informatics, ensuring that information is accurate, accessible, and useful for making informed decisions throughout the entire lifecycle of an event.

178. (C) 1, 2, and 3 only
Sensor technologies have several practical applications in emergency operations, such as using acoustic and video sensors on robots for search, and air quality sensors for safety assessments. Bio-sensors can also be used to monitor the vital signs of first responders in hazardous areas, ensuring their well-being. These technical uses directly support the safety and success of rescue missions. Personal messaging on social media, while a use of technology, is not a professional application of sensors for emergency operations. The focus is on gathering data that informs tactical decisions and protects lives.

179. (B) Decision Support System.
A software tool that models the impact of land-use policies on future vulnerability is a prime example of a Decision Support System. By simulating different scenarios, it helps planners understand the potential consequences of their decisions and identify the most effective long-term risk reduction strategies. This proactive use of technology is essential for mitigation, as it provides the evidence needed to build more resilient communities. By synthesizing complex data into actionable insights, these systems allow for more informed and strategic planning that minimizes the social and economic impact of future disasters.

180. (B) Provide a platform for real-time, ground-level information sharing from the affected population.
The greatest benefit of social media in a disaster is its ability to provide real-time situational awareness directly from the affected community. Citizens act as a decentralized network of sensors, reporting on local conditions, damages, and needs as they occur. This ground-level perspective fills gaps in official reports and allows for more responsive and targeted interventions. While social media cannot replace professional responders, it empowers the public to share information and supports a more comprehensive and community-centered approach to disaster communication and situational awareness during the chaotic response phase.

181. (A) Both A and R are true and R is the correct explanation of A.
Effective ICT in disaster management is a holistic process that goes beyond the technology itself. It requires a comprehensive socio-technical approach that integrates policies, institutional frameworks, and standard operating procedures. Furthermore, personnel must be continuously trained to use the tools effectively under pressure. Without these human and organizational components, technology cannot be integrated into operational workflows. The assertion and reason correctly explain that the successful application of technology depends on

Downloaded from www.pdf.tube

complete overhaul. This flexibility is essential for long-term environmental monitoring and for adapting to the changing needs of disaster risk reduction. By building systems that can expand, authorities ensure that their technological investments are sustainable and can provide a more comprehensive and resilient monitoring framework as their disaster management capabilities and data requirements grow over time.

231. (B) Ensure each person is registered once and their needs are tracked efficiently.
In a displacement shelter, a database management system is used to maintain accurate records of individuals and their specific needs. Its primary function is to provide a structured way to register people, avoiding duplication and ensuring that resources like food and medical care are distributed equitably. This data-driven approach is essential for managing large populations and tracking the progress of recovery. By providing a "single source of truth," these systems help coordinators avoid confusion and ensure that the needs of all displaced persons are addressed effectively and transparently throughout the relief and recovery process.

232. (D) Statement I is false, but Statement II is true.
Multimedia educational applications for risk reduction are much more than simple entertainment; they are powerful tools for building public awareness. By using a combination of text, images, and interactive elements, these applications make complex safety information more accessible and engaging for a wide audience. This proactive education is a key component of disaster preparedness, helping people understand hazards and the protective actions they can take. By engaging users through familiar digital formats, these tools foster a deeper understanding of safety procedures, leading to more resilient and better-prepared communities facing various environmental risks and emergencies.

233. (B) The performance of an AI model is heavily dependent on the quality and quantity of the data it was trained on.
While AI offers significant analytical power, its performance is fundamentally limited by its training data. If a model is trained on biased, inaccurate, or incomplete datasets, its predictions will be unreliable. This "garbage in, garbage out" principle is a major challenge in disaster management, where high-quality historical data may be limited. Building robust AI systems requires significant effort in data collection and cleaning. Understanding this dependency is essential for disaster managers, who must apply critical oversight and ensure that AI outputs are used as probabilistic judgments rather than absolute certainties in high-stakes situations.

NODIA

234. (B) Sending clear, actionable, and geographically targeted alerts via mobile phones.
Efficient disaster communication focuses on the impact of the message on public safety. Sending clear and actionable alerts directly to the people most at risk via their mobile phones is a prime example of efficient ICT use. This targeted approach ensures that the information is relevant and reaches its audience in time for them to take protective action. It avoids the confusion of broad broadcasts or the delay of long technical reports. By leveraging existing communication networks to deliver high-value, timely information, authorities can significantly improve the effectiveness of their early warning and emergency management strategies.

235. (B) To provide the powerful servers and storage systems needed to process massive datasets.
Big Data analytics requires an underlying computing infrastructure capable of handling the immense processing and storage needs of massive, complex datasets. This includes high-performance servers and scalable storage systems that can synthesize information from millions of sources like sensors, satellites, and social media. Without this foundational framework, Big Data could not be processed in time to be useful for disaster management. The infrastructure provides the computational power needed to uncover hidden patterns and provide real-time situational awareness, ensuring that the insights from Big Data can effectively inform strategic decision-making and emergency response.

236. (A) Both A and R are true and R is the correct explanation of A.
Robotics in urban search and rescue is a developing field because of the extreme mobility challenges posed by collapsed structures. Rubble

communication remains clear, accurate, and supportive of the necessary protective actions during high-stress disaster events.

188. (B) The central server and database for data storage and processing.
A large-scale sensor network depends on a central server and database as its primary computing infrastructure. This backbone is responsible for receiving, storing, and processing the continuous stream of data from all sensors in the field. Without this central processing power, the individual measurements could not be synthesized into a unified picture or used for analysis and early warnings. The infrastructure provides the necessary storage and computational resources to manage the "Big Data" generated by the network, ensuring that the information remains accessible and actionable for disaster managers and scientists.

189. (C) Response and rescue.
Using AI to automatically identify sounds of distress, like human screams, in audio streams is a specific application for search and rescue operations. This technology allows responders to locate victims more quickly in chaotic and noisy disaster zones where human ears might struggle. By identifying the location of people in need, AI helps prioritize rescue efforts and increase the chances of survival during the critical immediate response phase. This application demonstrates how advanced data processing can directly augment the capabilities of first responders, improving the speed and effectiveness of life-saving missions in unstable environments.

190. (B) A city planner or a risk manager.
ICT applications for decision support in mitigation are primarily designed for long-term strategic planning. They analyze data to identify vulnerabilities and model the impact of different risk reduction strategies, making them most useful for city planners and risk managers. These professionals use the insights to guide land-use decisions, building codes, and infrastructure projects before a disaster occurs. While other stakeholders play roles in emergencies, the technical task of evaluating mitigation options relies on the data-driven analysis provided by these specialized systems to build more resilient and safer urban and regional environments.

191. (B) UAV - Providing close-up, high-resolution aerial imagery of a disaster zone.
Correctly pairing technologies with their functions is essential for effective disaster management. UAVs are primarily used for rapid aerial reconnaissance, providing the close-up, high-resolution imagery needed for damage assessment and search operations. Other technologies have different roles: AI is for data analysis, not physical labor; Big Data involves complex datasets, not manual logbooks; and robotics are for hazardous tasks, not social media campaigns. Understanding these specialized roles ensures that the right tools are selected to address the specific informational and operational challenges of each phase of the disaster management cycle.

192. (B) 2, 3, and 4 only
ICT is a powerful tool for disaster risk reduction but is not a "magic bullet"; success depends on its integration into local contexts and infrastructures. Key applications include enhancing situational awareness by synthesizing data and using social media as a real-time information source, despite its challenges with misinformation. ICT plays a role across all disaster phases, far beyond just sending alerts. Effective management involves a strategic, socio-technical approach where technology is used to improve communication, coordination, and decision-making, while always considering the practical limitations and skills of the people and organizations involved.

193. (A) Gain data that can be used to understand the hazard and provide early warnings.
The fundamental goal of environmental risk monitoring is to collect objective data that reveals the state of a hazard. Sensors measure physical properties like seismic motion, water levels, or gas concentrations, providing a scientific basis for understanding how risks are changing. This real-time information is essential for early warning systems, allowing authorities to issue alerts before a hazard becomes a disaster. By moving from speculation to data-driven insights, technology enables a more proactive and effective approach to managing environmental risks and protecting communities through timely and accurate forecasting.

194. (C) A UAV equipped with a LiDAR sensor.

Click Here to Buy book on Amazon

a supportive and well-organized management environment that ensures digital tools are used purposefully to save lives and reduce risks.

182. (B) Prevent human exposure to lethal risks like radiation.
Using robots for inspection in extreme environments, such as damaged nuclear facilities, is primarily a safety measure. Robots can navigate areas with high radiation levels or chemical toxicity that would be lethal to humans. By performing these tasks, they provide essential situational data and images without endangering personnel. This highlights the most critical role of robotics in disaster management: to replace human presence in environments where risks are unacceptable while still achieving necessary operational goals. This application ensures that hazards are monitored and assessed safely, protecting the health of the responders.

183. (B) The audience's ability to receive, understand, and act upon the information.
Efficient disaster communication is defined by the impact on the recipient rather than the complexity of the message. For a communication strategy to be successful, the public must be able to access the alert, understand the instructions, and have the capability to take the required action. This requires using appropriate channels, simple language, and geographically targeted messaging. A strategy that ignores the audience's context and constraints will fail to trigger the necessary protective responses. Success depends on creating inclusive and accessible communication frameworks that empower everyone to act safely during an emergency.

184. (B) P-2, Q-1, R-4, S-3
Different sensors are specialized for monitoring specific hazards. Strain gauges and accelerometers are used for dam integrity, while tiltmeters and gas sensors detect precursors to volcanic eruptions. Water level sensors and rain gauges are essential for flash flood warnings. For search and rescue, acoustic and thermal sensors help locate survivors in rubble. Correctly matching these technologies to their intended application is fundamental for designing effective and reliable monitoring and rescue systems. This technical precision ensures that the data collected is relevant and can be used to trigger timely and life-saving actions.

185. (B) The entire information flow, from data acquisition to decision making, across all disaster phases.
Disaster informatics is a comprehensive field that covers the entire lifecycle of information in a disaster, from initial data collection using various technologies to its analysis and use in final decision-making. It integrates technology, information science, and emergency management to improve situational awareness and operational outcomes throughout mitigation, preparedness, response, and recovery. This interdisciplinary approach ensures that data from diverse sources is synthesized into a unified understanding, promoting an evidence-based and data-driven strategy for reducing risks and managing emergencies more effectively at all levels and for all types of hazards.

NODIA

186. (C) The small and manageable volume of the data.
Big Data in disaster management is characterized by its massive and complex nature, not by its simplicity. The challenges associated with it include managing huge volumes of information, ensuring data privacy, and having the powerful computing infrastructure needed for analysis. Additionally, verifying the accuracy of data from diverse, unstructured sources is difficult. Assuming that the volume is small and manageable is a misconception. Effective use of Big Data requires overcoming these significant technical and ethical hurdles to extract meaningful and trustworthy insights that can improve risk assessment and disaster response strategies.

187. (B) Spread of misinformation on social media; Effect: Hampered and confused response efforts.
The relationship between social media and disaster response is often complex, with the spread of misinformation having a direct negative impact on official efforts. False rumors can cause unnecessary panic, mislead the public, and force agencies to waste resources correcting inaccuracies. This hinders the overall effectiveness of the emergency response. Understanding this cause-and-effect relationship is essential for disaster managers, who must implement strategies to monitor and counter misinformation in real-time to ensure that public

200. (B) A sensor system includes not just the sensor but also the power supply, data transmission, and data processing components.
A simple sensor only detects a physical property, but a sensor system is a complete technological framework designed for operational use. It integrates the sensor with essential components like a reliable power source, communication modules for data transmission, and the backend software needed for processing and analysis. This integration is what allows the data to be turned into actionable information for early warnings or risk monitoring. Understanding this distinction is critical for designing and deploying resilient networks that can function effectively throughout the chaotic and demanding conditions of a disaster.

201. (C) Ability to operate in all weather conditions, including hurricanes and blizzards.
UAVs provide rapid deployment, high-resolution imagery, and access to dangerous areas, making them invaluable for disaster response. However, they are not all-weather tools; extreme conditions like high winds, heavy rain, or blizzards can ground them or make their data unusable. This weather dependency is a significant operational limitation that must be accounted for in emergency planning. While UAVs offer powerful visual and technical capabilities, their deployment is always subject to the environmental constraints of the disaster zone, requiring responders to have alternative methods for assessment when conditions are too severe for flight.

202. (D) Statement I is false, but Statement II is true.
ICT is highly valuable across all phases of disaster management, from long-term risk modeling in mitigation to resource tracking in recovery. It is not limited to the response phase. Effective integration requires a socio-technical perspective that considers technology, people, policies, and processes together. This holistic view ensures that digital tools are used purposefully and fit the human and organizational context of disaster management. Success depends on balancing technological capabilities with clear strategies and trained personnel to ensure that information systems effectively support the mission of reducing risks and protecting communities.

203. (B) 2 and 4 only
Efficient use of sensor technology involves more than just data collection; it requires having clear protocols for action and integrating the data into broader operational systems. When measurements cross a threshold, there must be a predefined plan for warning or response. Integrating sensor feeds into a common operational picture ensures that all stakeholders have access to real-time information for decision-making. Neglecting maintenance or storing data in isolation are poor practices that lead to system failure. Success depends on a coordinated approach where technology is part of an active, well-managed risk reduction strategy.

204. (C) Big Data.
Analyzing massive amounts of anonymized mobile phone location data to understand population movement is a prime example of a Big Data application. This large-scale analysis provides a real-time, comprehensive view of how people behave during an evacuation, which is impossible with traditional methods like surveys. By synthesizing data from millions of sources, authorities can identify bottlenecks and optimize their planning for future events. This use of computational power to extract meaningful patterns from diverse and high-volume data streams is a core part of modern, data-driven disaster risk management and strategic situational awareness.

205. (A) Perform tasks like atmospheric testing and visual search without risking human lives.
In a collapsed mine, the environment is often unstable and may contain toxic gases, making it extremely hazardous for human rescuers. The primary role of robotics is to perform essential search and environmental testing tasks without endangering lives. Robots can carry gas sensors and cameras into deep and unstable areas to locate victims and assess the safety of the atmosphere. This application highlights the most critical benefit of disaster robotics: providing life-saving information and operational capabilities in lethal or unreachable environments, significantly improving the safety and effectiveness of complex rescue missions.

206. (A) Both A and R are true and R is the correct explanation of A.

Downloaded from www.pdf.tube

Data management is a fundamental component of modern disaster risk reduction because of the immense volume of information generated by sensors, satellites, and social media. Without a structured database system, this "Big Data" would be disorganized and unusable for decision-making. Effective management ensures that information is accurate, accessible, and integrated, allowing for rapid querying and analysis during a crisis. The assertion and reason correctly explain that the value of technological data acquisition is entirely dependent on the ability to organize and manage that information effectively for practical emergency management and response.

207. (C) All information found on social media during a crisis is verified and accurate.
Social media is a multi-functional tool for dissemination, check-ins, and two-way communication, but it is never a source of perfectly verified or accurate information. Rumors, misinformation, and panic-inducing posts are common during disasters. Authorities must actively monitor platforms and filter the information they find. The assumption that all social media content is reliable is dangerous and incorrect. Effective use requires a critical approach where user-generated reports are used as a source of situational awareness but must be verified before being used to guide official response actions or strategic decisions.

208. (A) To conduct a thorough needs assessment and site survey before deployment.
Designing a successful sensor system starts with understanding the specific hazard and the environment where it will be monitored. A thorough needs assessment and site survey ensure that the sensors are placed in optimal locations to provide accurate and representative data. Choosing technology based on cost alone or deploying without a plan leads to system failure. Strategic planning ensures that the network is fit-for-purpose and can provide the reliable information needed for early warnings and long-term risk reduction, maximizing the effectiveness of the investment in disaster monitoring technology.

209. (A) P-4, Q-1, R-2, S-3
ICT tools are specialized for different phases of disaster management based on their primary function. Predictive modeling supports long-term mitigation, while real-time tracking is essential for the response phase. Social media for fundraising and volunteer management is a key part of recovery, and mass notification systems are vital for preparedness. Matching technologies to these phases ensures that they are applied strategically to meet the unique information and operational needs of each stage. This structured approach allows for more efficient and effective disaster risk reduction and emergency management across all organizational levels.

210. (A) The need to manage a rapid, high-volume, multi-directional flow of information.
The changing media environment, characterized by social media and real-time connectivity, has transformed disaster communication into a complex task. Disaster managers must now handle a high volume of information that flows in multiple directions between the public, the media, and authorities. Managing this flow, including filtering out rumors and maintaining official messaging, is the greatest challenge. Failure to engage with this environment can lead to an information vacuum and public panic. Success requires proactive strategies for monitoring, engagement, and the rapid dissemination of verified information through diverse digital and traditional channels.

211. (D) Manually filling sandbags to build a levee.
Artificial intelligence excels at automating complex data-driven tasks like analyzing imagery, predicting hazard intensity, and optimizing logistical routes. These applications utilize its computational power to identify patterns and provide insights. However, manually filling sandbags is a physical labor task that does not involve digital data or analytical modeling. AI is a tool for augmenting or automating informational and strategic processes, not a replacement for basic manual labor in the field. Understanding the scope of AI helps disaster managers apply it correctly to the analytical challenges of risk reduction and emergency response.

212. (A) 1, 2, and 4 only
Modern disaster management utilizes a variety of ICT tools and techniques, including mobile

NODIA

apps for damage assessment, GIS for spatial visualization, and satellite phones for resilient communication. Amateur radio remains a vital backup technique when other networks fail. The claim that a single tool is sufficient is incorrect; effective management requires an integrated system of diverse technologies. By using a combination of these tools, authorities can improve situational awareness, coordination, and the overall efficiency of their response, ensuring that they can communicate and manage information effectively under various emergency conditions.

213. (C) An ICT application for decision support in mitigation.
Using a computer model to simulate economic losses and guide budget allocation is a core application of ICT for decision support in the mitigation phase. This allows policy-makers to evaluate different retrofitting options based on a scientific understanding of potential risks and costs. Mitigation focuses on pre-disaster actions that reduce long-term vulnerability. By using data-driven insights to inform financial and engineering decisions, authorities can build more resilient communities and minimize the future social and economic impact of earthquakes, ensuring that investments are used strategically to protect lives and property.

214. (A) Using the data generated by the sensors to make timely and effective decisions.
The efficient use of sensor technology is defined by the impact of its measurements on the disaster management process. It involves ensuring that the data collected is accurately interpreted and used to trigger early warnings or guide response actions. Simply deploying sensors without a plan for their data is inefficient. True efficiency requires integrating these systems into broader decision-making frameworks, where their quantitative insights can improve situational awareness and risk reduction. The goal is to turn raw physical measurements into actionable information that leads to more effective and timely interventions.

215. (A) 2, 4, 1, 3
The information flow in an ICT-enabled disaster response follows a logical progression from field reporting to strategic action. It begins with a field worker submitting a report via a mobile app, which is then transmitted over a network to a central database. Next, the data is analyzed and visualized on a dashboard in the Emergency Operations Center. Finally, decision-makers use this consolidated information to allocate resources and coordinate the response. This structured sequence ensures that information is gathered accurately and synthesized quickly to provide the situational awareness needed for effective emergency management.

216. (B) Provides the processing power and storage needed to handle large-scale data from sensors, models, and other sources.
A robust computing infrastructure is the essential foundation for modern disaster management, providing the necessary processing power and storage to handle complex datasets. This includes the massive volume of information from sensor networks, satellite imagery, and predictive risk models. Without this backend support, these data-driven tools would be unable to function. Infrastructure ensures that information can be processed quickly to provide situational awareness and support decision-making across all phases. It is the "engine" that drives disaster informatics, enabling the synthesis of diverse information streams into actionable insights for risk reduction.

217. (D) Statement I is false, but Statement II is true.
Social media is not purely a source of misinformation, although it must be monitored carefully. It can provide invaluable situational awareness by allowing emergency managers to see real-time reports from the affected public. While official sources remain the primary authority, crowdsourced data can fill gaps and identify unmet needs. Effective use involves using sophisticated filtering and verification to separate useful information from rumors. By engaging with social media as a dynamic data source, disaster managers can gain a more comprehensive view of the situation and coordinate a more responsive and effective emergency response.

218. (A) An application of AI where models learn patterns from data without being explicitly programmed for a task.
Machine learning is a core technology within artificial intelligence that allows systems to automatically identify complex patterns in data

Click Here to Buy book on Amazon

Creating detailed 3D maps of a damaged urban area requires high-precision visual and spatial data. A UAV equipped with a LiDAR sensor is the most appropriate tool for this task, as it can rapidly capture the complex geometry of rubble and damaged structures from the air. These maps are essential for planning debris removal and identifying structural hazards. Unlike social media or ground sensors, this combination provides the objective, high-resolution spatial information needed for large-scale administrative and engineering tasks in the immediate aftermath of an earthquake, improving the efficiency of recovery operations.

195. (A) Both A and R are true and R is the correct explanation of A.
Social media improves the efficiency of disaster response by providing a platform for crowdsourcing real-time situational data. By observing reports of damage and needs from the public, agencies can gain a more comprehensive view of the disaster and prioritize their resource allocation accordingly. This ground-level information often reaches responders faster than traditional reports. The assertion and reason correctly highlight how the multi-directional flow of information on social media directly supports more responsive and effective decision-making, demonstrating a powerful and practical application of modern communication technology in emergency management.

196. (B) Reliance on physical infrastructure (power, communications) that can be compromised during a disaster.
While sensor technologies provide essential data, their greatest weakness is their dependence on the very infrastructure that disasters often destroy. Sensors require consistent power and reliable communication links to transmit their measurements to decision-makers. If the electrical grid or cellular networks fail during an event, the sensors become useless. This vulnerability requires designers to build resilient and redundant systems. Understanding this limitation is essential for emergency planning, ensuring that disaster managers have backup communication methods and do not rely solely on technology that may fail during critical moments.

197. (C) A GIS software like QGIS or ArcGIS.
GIS software like QGIS or ArcGIS is a fundamental ICT application tool used throughout disaster management. It allows for the collection, analysis, and visualization of spatial data, which is essential for vulnerability mapping, situational awareness, and planning. Other items like sandbags or first aid kits are physical supplies, while printed maps lack the dynamic and analytical capabilities of modern software. GIS provides the computational power needed to synthesize complex geographical information, helping disaster managers make data-driven decisions about where to prioritize resources and how to design effective risk reduction strategies.

198. (B) P-3, Q-4, R-2, S-1
Understanding key ICT concepts and their definitions is essential for their effective application in disaster management. Big Data refers to massive datasets analyzed computationally, while Machine Learning is a type of AI where systems improve through experience. The Internet of Things involves interconnected physical devices and sensors that share data. Disaster Informatics is the broad field studying how all these components are applied across the disaster lifecycle. Correctly identifying these concepts ensures that technology is used strategically to build more resilient information systems and more effective, data-driven disaster risk reduction strategies.

199. (B) Open-source, robust, and easy-to-use tools with strong community support.
In resource-constrained environments, the priority for ICT deployment should be on sustainability and usability. Open-source tools are cost-effective and benefit from global community support, while robust and easy-to-use software ensures that local personnel can operate it with minimal training. Prioritizing complex or expensive proprietary systems can lead to failure if licenses expire or technical support is unavailable. A focus on accessible and resilient technology ensures that the tools remain functional and useful for the long term, providing a sustainable foundation for disaster risk reduction and emergency management in diverse contexts.

NODIA

using telecom data. Sensor technology, such as GPS receivers, is fundamental for monitoring environmental changes like tectonic plate movement. Understanding these specialized roles ensures that technology is used purposefully to address the various informational and physical challenges across all phases of disaster management.

225. (B) The lack of reliable power supply and internet connectivity.
A primary challenge for deploying ICT in many developing regions is the lack of stable underlying infrastructure, such as electricity and high-speed internet. Digital tools like cloud-based databases or real-time sensor networks depend on these foundational resources to function. Without them, even the most advanced technology is unusable. This "digital divide" highlights the need for robust and low-power solutions that fit the local context. Overcoming these infrastructure hurdles is essential for ensuring that the benefits of modern ICT are accessible and effective for building resilience in vulnerable communities worldwide.

226. (B) To provide decision-makers with analyzed information and scenario modeling to aid their judgment.
The primary purpose of a Decision Support System (DSS) is to augment human intelligence rather than replace it. These systems process complex datasets and model different scenarios to provide decision-makers with clear, evidence-based insights. This aids their judgment in prioritizing resources and choosing the most effective mitigation or response strategies. A DSS does not automate the final decision but provides the analytical foundation needed for more informed and strategic choices. By synthesizing technical data into actionable information, these systems help disaster managers navigate complex crises more effectively and with greater confidence.

227. (D) All of the above
Emerging technologies offer a range of powerful capabilities for disaster risk reduction. UAVs provide rapid aerial reconnaissance, AI predicts the path of hazards like wildfires, social media offers real-time situational awareness, and robotics support search and rescue in hazardous areas. Each of these tools addresses a specific challenge in disaster management. By using them together as part of an integrated strategy, authorities can significantly improve their ability to predict, assess, and respond to various disasters. This comprehensive technological approach is essential for building more resilient communities and minimizing the social and economic impacts of catastrophic events.

228. (A) The ability to provide early warning based on the detection of precursor phenomena like ground movement.
The main benefit of monitoring environmental risks with sensors is the ability to detect subtle changes that signal an impending hazard, such as small ground movements before a landslide. This real-time detection allows for the dissemination of early warnings, giving communities the time needed to evacuate or take protective actions. While technology cannot stop the physical event, it provides the essential quantitative data needed for proactive risk management. By moving from speculation to data-driven forecasting, sensor systems help save lives and property through more timely and accurate identification of threats in unstable environments.

229. (A) Sensor technology for responder safety.
Wearing devices that monitor vital signs and hazardous exposures is a critical application of sensor technology designed for the safety of first responders. By transmitting this data in real-time to a command post, managers can ensure that personnel are not in immediate danger and can intervene if a worker's health is compromised. This technical monitoring is essential for operations in hazardous environments like confined spaces or chemical spill sites. It demonstrates how specialized sensors can be used to protect the people who are carrying out life-saving missions, improving the overall safety of emergency response.

230. (B) The system is scalable and can be expanded if needed.
A key design practice for sensor systems is ensuring scalability, allowing the network to grow as more resources become available or as the monitored hazard evolves. A scalable system can accommodate additional sensors and higher data volumes without needing a

NODIA

through experience. In disaster management, ML is used to analyze historical datasets to predict hazard probabilities or identify damage from post-disaster imagery. This ability to handle diverse and unstructured information without specific programming for every scenario makes it a powerful tool for improving risk assessment and situational awareness. By uncovering insights that are not apparent to humans, ML provides a more scientific and automated foundation for proactive disaster risk reduction.

219. (D) The ability to provide objective, quantitative data.
Sensor systems have several limitations, including vulnerability to damage, dependence on power and communication, and the potential for false alarms. However, their primary benefit is the ability to provide objective and quantitative data, which is not a limitation. This precise and continuous information is essential for early warning systems and scientific modeling. Understanding both the strengths and the constraints of sensor technology allows disaster managers to design more resilient and effective monitoring networks, ensuring that the objective data they provide is accurately interpreted and used to trigger timely and life-saving actions.

220. (B) To conduct detailed mapping of high-risk areas to support evacuation planning.
In the preparedness phase, UAVs are most effectively used for high-resolution mapping of areas vulnerable to hazards like floods or landslides. These maps provide the detailed spatial data needed to design effective evacuation routes and identify safe assembly points. Unlike their use in the response phase for damage assessment or supply delivery, their role in preparedness is focused on gathering the information needed to plan for a disaster before it occurs. This proactive use of technology helps authorities create more accurate and detailed preparedness plans, improving community safety and resilience through evidence-based planning.

221. (A) Both A and R are true and R is the correct explanation of A.
The changing media environment forces disaster management agencies to be more proactive in their communication to maintain public trust. In a world of social media and rapid news cycles, a lack of official information creates an "information vacuum" that is quickly filled by rumors and speculation. By providing timely and accurate updates, agencies can maintain their role as the authoritative source of truth and reduce public panic. The assertion and reason correctly explain that engagement is not optional; it is a critical strategic requirement for effective crisis communication and maintaining public safety during a disaster.

222. (A) A targeted alerting technology.
An ICT solution designed to alert residents of a specific neighborhood about a nearby threat is a prime example of targeted alerting technology. By using location-based systems like cell broadcast or SMS, authorities can send warnings only to those who are in immediate danger. This specificity minimizes unnecessary panic in unaffected areas and ensure that the message reaches its intended audience. Targeted alerts are a cornerstone of modern early warning systems, providing a more efficient and effective way to disseminate actionable information that can trigger immediate protective responses in localized emergency situations.

223. (B) AI can process and categorize millions of posts in real-time, which is impossible for humans.
During a large-scale flood, the volume of social media posts is far beyond the capacity of human monitors. The key advantage of AI is its ability to scan and categorize millions of messages in real-time to identify critical reports, such as requests for rescue or infrastructure damage. This automated filtering is essential for gaining situational awareness when time is limited. By synthesis of massive amounts of unstructured data, AI allows emergency managers to see the "big picture" and prioritize their response efforts based on the most current and actionable information shared by the public online.

224. (C) P-2, Q-4, R-3, S-1
Correctly matching emerging technologies to their applications is essential for building a comprehensive disaster risk reduction strategy. Robotics excel at search and rescue in confined spaces, while machine learning is used for predictive modeling based on historical data. Big data analytics provides the processing power to track large-scale population movements

Downloaded from www.pdf.tube

is highly unstructured and unpredictable, making it difficult for current locomotion systems to navigate safely. This prevents robots from fully replacing human search teams. The assertion and reason correctly identify this ongoing technological hurdle, highlighting why robotics is currently used as a supplemental tool for exploring small voids or dangerous areas. Success in this field depends on continued research into locomotion and autonomous navigation to create robots that can effectively traverse the complex and unstable ruins of a disaster zone.

237. (B) Dramatically increasing the number and types of internet-connected sensors providing real-time data.
The Internet of Things (IoT) transforms disaster risk reduction by enabling the widespread deployment of interconnected sensors. These devices can monitor a wide range of properties, from river levels and seismic activity to the structural health of buildings. By dramatically increasing the amount of real-time data available, the IoT provides a more comprehensive and high-resolution picture of environmental risks. This continuous stream of information is essential for early warning systems and for gaining situational awareness during an emergency, allowing authorities to detect threats faster and coordinate a more effective and data-driven response across large and diverse geographic areas.

238. (D) Robotics - Providing long-term shelter and housing.
Each ICT tool has a specialized function in disaster management. GIS is for spatial analysis, UAVs for aerial assessment, and social media for information dissemination. However, robotics are designed for search, rescue, and hazardous tasks, not for providing long-term shelter or housing, which is an architectural and logistical challenge. Understanding the specialized roles of these technologies ensures that the right tools are selected to address the specific informational and physical needs of each phase. Correctly pairing tools with their functions is essential for building a coherent and effective technological framework for disaster risk reduction and emergency management.

239. (B) P-4, Q-2, R-1, S-3
Each component of disaster ICT has specific characteristics and challenges. UAVs are limited by flight time, while social media information often has questionable veracity. Sensor data transmission is vulnerable to network failure, and AI model training requires large, labeled datasets. Recognizing these characteristics is essential for designing resilient information systems. By understanding the limitations and requirements of each technology, disaster managers can build redundancy into their networks and apply critical oversight to their data, ensuring that technological insights are used effectively and safely to support risk reduction and emergency response across the entire disaster lifecycle.

240. (B) Integrated, targeted, redundant, and accessible.
The goal of future alerting technologies is to create a more resilient and inclusive system. This involves integrating multiple channels to ensure redundancy, targeting alerts geographically to those at risk, and making sure the messages are accessible and understandable to all populations, including those with disabilities or without digital access. A system that is redundant and multi-modal is less likely to fail during a disaster. By creating more effective and inclusive warning frameworks, authorities can ensure that life-saving information reaches every individual, empowering entire communities to take timely and appropriate protective actions in any emergency situation.

241. (D) The manual distribution of blankets in a relief camp.
Disaster informatics is focused on the management and application of information through digital technology. This includes developing data standards, creating decision support systems, and building sensor networks. These tasks all involve processing and utilizing disaster-related data. The manual distribution of blankets, while a critical part of relief operations, is a physical logistical task that does not involve the systematic management of information technology or data analysis. Understanding the scope of disaster informatics helps professionals focus on how information systems can be used to improve the efficiency and coordination of these

NODIA

288. (B) Big Data provides a level of analytical depth and speed previously unattainable.
Big Data provides a level of analytical depth and speed that was previously unattainable through traditional disaster management approaches. By processing vast and complex datasets rapidly, these technologies enhance situational awareness and optimize resource allocation. This shift allows authorities to model risks more accurately and respond to crises with more precise information than was possible with older, manual methods.

289. (D) Using a machine learning model to analyze post-flood satellite and drone imagery to classify damaged areas.
Using a machine learning model to analyze post-flood satellite and drone imagery is the most efficient method for assessing widespread damage. This automated approach can classify affected areas much faster than human teams could perform manual surveys. By rapidly identifying damaged buildings and infrastructure, authorities can allocate response resources more effectively and accelerate the overall recovery process.

290. (A) The need for appropriate computational infrastructure and human expertise.
The implementation of Big Data and machine learning in disaster management faces challenges related to the need for appropriate computational infrastructure and human expertise. Developing systems capable of managing complex data streams requires significant technical resources. Furthermore, skilled professionals are necessary to interpret the analytical results and integrate these insights into effective disaster response and long-term mitigation strategies.

291. (C) The capacity for rapid situational awareness and damage assessment in inaccessible areas.
Unmanned Aerial Vehicles offer unparalleled capabilities for rapid situational awareness and damage assessment in the immediate aftermath of a disaster. Equipped with high-resolution cameras and thermal sensors, drones can map affected areas and locate survivors in locations that are otherwise inaccessible. This allows for quick information gathering without risking the lives of human responders in hazardous environments.

292. (A) Robotics enables physical intervention in hazardous zones, while UAVs primarily perform observation.
Robotics complements the observational capabilities of UAVs by enabling physical intervention in hazardous zones. While drones are primarily used for mapping and surveillance, robots can enter collapsed structures to deliver supplies, perform repairs, or search for victims. This physical capability allows for tasks to be carried out in environments where human presence would be dangerous or even lethal.

293. (D) predict the cascading effects of a disaster by analyzing complex data.
A key application of artificial intelligence in disaster management is its ability to predict cascading effects by analyzing complex data streams. AI can identify how one event, such as a power outage, might lead to further disruptions in communication or transportation. This automated analysis helps authorities understand the full scope of a disaster and plan more effective response strategies.

294. (B) Deploying AI-guided robots and sensor-equipped UAVs to enter and survey the hazardous zone.
In a hazardous environment following an explosion, the most appropriate approach is deploying AI-guided robots and sensor-equipped UAVs. Drones can provide rapid aerial surveillance and damage mapping, while robots can enter the contaminated site to search for survivors or assess critical infrastructure. These technologies together allow for an effective response without exposing human rescue teams to toxic gases.

295. (C) AI analyzes data to guide the deployment of UAVs and robots for a more effective response.
The synergy between AI, UAVs, and robotics involves AI-powered analysis guiding the deployment of aerial and ground-based machines. This integration enhances the efficiency and safety of disaster operations by ensuring that robots and drones are used effectively based on real-time data. This powerful combination allows for more precise situational awareness and physical intervention during response and recovery efforts.

Click Here to Buy book on Amazon

multi-modal and resilient warning systems that ensure life-saving information reaches every member of the population, regardless of their technological status or demographic background.

248. (B) Identify patterns and anomalies within complex data streams.
The primary value of AI and machine learning in analyzing Big Data is their ability to uncover complex patterns and identifying anomalies that are not apparent to humans. In the context of a disaster, this can mean identifying specific requests for help in social media feeds or detecting precursory signals in vast sensor datasets. This automated analysis is essential for managing the scale and speed of modern information flow. By synthesizing diverse data streams into actionable insights, AI provides disaster managers with a powerful tool for situational awareness, risk assessment, and more effective strategic decision-making in complex and fast-moving emergency scenarios.

249. (B) Their difficulty in moving over and through unstructured rubble.
Navigating the unstable and unstructured ruins of a disaster zone remains the most significant technical hurdle for ground-based search and rescue robots. Rubble from collapsed buildings is unpredictable and difficult for current locomotions to cross, which limits the robots' ability to explore deep into debris. This challenge means that robots cannot yet replace traditional human or canine search teams in all environments. Overcoming these mobility issues through advanced design and autonomous navigation is a primary goal of research in disaster robotics, as it would allow for more effective search operations without risking the lives of human responders.

250. (A) Reduce the loss of life, and minimize the social and economic impact of disasters.
The ultimate goal of utilizing ICT and emerging technologies in disaster risk management is to enhance public safety and build community resilience. By improving the speed and accuracy of warnings, optimizing the allocation of resources, and providing better situational awareness, these tools help authorities minimize the catastrophic consequences of various hazards. Whether through long-term mitigation planning or immediate emergency response, technology serves as a critical enabler for more effective and data-driven disaster management. The final measure of success is the reduction in lives lost and the preservation of social and economic stability in the face of environmental threats.

NODIA

251. (B) To ensure the timely and accurate dissemination of information
The primary objective of implementing information and communication technology in modern disaster risk management strategies involves the strategic integration of various platforms. This focus ensures the dissemination of precise data to affected populations and response agencies happens without delay. By optimizing these real-time systems, authorities can facilitate a more coordinated and efficient response, ultimately enhancing resilience.

252. (A) a broadcasting model to an interactive and participatory model.
Contemporary media environments necessitate a transition from traditional one-way information broadcasting to modern frameworks. This shift emphasizes interactive and participatory communication models that allow for two-way engagement between authorities and the public. Such a strategic move beyond simple broadcasting ensures that affected individuals are not just passive recipients but active participants in the information dissemination process.

253. (C) A single technology is inadequate for reaching all segments of a population.
Effective disaster communication acknowledges that diverse segments of a population have varying access to technology. Relying on a single technological tool is insufficient because no individual platform can reach every person during a crisis. Therefore, adopting a multi-channel approach is essential to overcome the limitations of any specific technology and ensure comprehensive information coverage for all.

254. (D) A plan that integrates radio broadcasts, SMS alerts, social media updates, and satellite phones.
A successful disaster communication strategy must utilize a multi-channel approach to maximize reach across a diverse population. Integrating various platforms such as radio broadcasts, SMS alerts, social media updates,

and other broader disaster response and recovery activities.

242. (A) 1, 2, and 5 only
Efficient use of ICT requires a strategic approach that considers the local context and the specific needs of the disaster. Key applications include using machine learning for prediction and robust database systems for resource tracking. While social media and UAVs are important, they have significant challenges with veracity and operational limits, and are not always reliable or focused solely on reconstruction. Effective management involves using an integrated system of verified data and resilient technologies that fit the infrastructure and skills available, ensuring that technology effectively supports situational awareness, coordination, and decision-making across all phases of disaster risk reduction.

243. (B) Ensuring clear messages are sent via channels the audience uses.
Efficient disaster communication is defined by how well the intended audience receives and understands the message. This requires using simple language and the most accessible communication channels, whether it be SMS, social media, or traditional media like radio. Using technical jargon or delaying messages hinders public safety. The goal is to maximize the impact of the communication by making it clear, actionable, and easy to access for everyone. By tailoring messaging strategies to the needs of the community, authorities can ensure that early warnings and instructions lead to the correct protective actions, ultimately saving lives and reducing risks.

244. (B) An ICT application for decision support.
Real-time evacuation routing software that integrates traffic, weather, and population data is a sophisticated example of an ICT application for decision support. By synthesizing these diverse feeds, it provides authorities with actionable insights to manage complex logistics during a crisis. This automated analysis helps prioritize routes and reduce bottlenecks, improving the overall efficiency and safety of the evacuation. These systems augment human judgment by providing a data-driven "big picture" of the situation, demonstrating how technology can be used to coordinate complex emergency operations and protect large populations during fast-moving disaster events in urban areas.

245. (A) 1, 3, 2, 4
Data complexity in disaster management increases from simple individual readings to massive streams of unstructured information. A single sensor measurement is the simplest form. This is followed by spreadsheets of inventory and then more complex structured databases of affected populations. The most complex is Big Data, which involves continuous, unstructured streams from multiple sources like social media and video feeds. Understanding this hierarchy of complexity is essential for designing the computing infrastructure and analysis techniques needed to manage information effectively across all phases of disaster risk reduction, from localized monitoring to large-scale emergency response and recovery coordination.

246. (B) It can provide early warning of potential failure, allowing for preventative maintenance or closure.
Monitoring the structural health of critical infrastructure with sensors is a proactive mitigation strategy. By detecting subtle signs of stress or movement, these systems can provide early warning of a potential failure before a disaster occurs. This allows authorities to take preventative actions, such as maintenance or closing the bridge to traffic. While technology cannot prevent environmental hazards, it provides the essential quantitative data needed to manage their impact on the built environment. This scientific approach helps protect lives and minimize economic losses by ensuring that critical infrastructure is identified as vulnerable and managed promptly.

247. (D) Statement I is false, but Statement II is true.
The "digital divide" remains a significant concern in disaster communication because not everyone has access to or proficiency with modern technology like smartphones. Future solutions for alerting must prioritize inclusivity by including methods to reach people without reliable digital access, such as through sirens, radio, or community networks. Relying only on high-tech channels would exclude vulnerable groups, increasing their risk during a disaster. Success in public safety depends on creating

Downloaded from www.pdf.tube

confusion or panic, authorities can guide people toward safe behaviors, thereby minimizing the potential loss of life.

263. (C) It is a standard designed to facilitate the dissemination of alerts across multiple platforms.
The Common Alerting Protocol is a standardized framework designed to facilitate the simultaneous dissemination of emergency alerts across diverse communication platforms. It allows authorities to push critical information through mobile networks, public broadcasts, and social media at once. This standard ensures that messages are consistent and can be easily interpreted by various technological systems for broader reach.

264. (D) Robust encryption and security protocols to prevent unauthorized access and false alerts.
As cyber-attacks on communication infrastructure pose a significant risk, incorporating robust security measures is a priority for modern alerting systems. Encryption and security protocols are essential to prevent the unauthorized disruption or spoofing of emergency alerts. Protecting the integrity of the system ensures that the public receives only verified and authentic information during critical disaster events.

265. (A) To build a resilient, secure, and people-centric alerting ecosystem.
The ultimate goal for future alerting technologies is the development of a resilient, secure, and people-centric ecosystem. This comprehensive approach aims to build systems that not only provide warnings but also effectively guide the public response. By minimizing loss of life and property, these advanced solutions ensure that communication remains functional and reliable even during severe emergencies.

266. (B) A strategic approach to their deployment.
Merely possessing advanced information and communication technology tools is insufficient for effective disaster management without a strategic approach to their deployment. This involves ensuring interoperability between different systems and scalability to handle massive data loads. Strategic planning also encompasses the thorough training of personnel to interpret outputs and use these sophisticated tools correctly during critical situations.

267. (B) providing a framework to model scenarios and evaluate mitigation strategies.
Decision Support Systems facilitate disaster mitigation by providing a structured, data-driven framework for analysis. These systems integrate various data sources to model potential disaster scenarios and evaluate the effectiveness of different mitigation strategies. By answering critical questions about risk and resource allocation, they enable authorities to transition from reactive responses to more proactive, planned mitigation efforts.

268. (A) The utility of a GIS is heavily dependent on the quality and timeliness of its data.
The effectiveness of a Geographic Information System in disaster mitigation depends entirely on the quality and timeliness of the data it contains. Accurate and up-to-date information is essential for decision-makers to interpret outputs and plan interventions effectively. Without reliable data, even the most advanced GIS cannot provide the necessary insights for targeting at-risk populations or infrastructure.

269. (C) Develop a DSS that integrates seismic hazard maps, building vulnerability data, and population density.
To effectively strengthen infrastructure, a planning committee should develop a Decision Support System that integrates seismic hazard maps, building vulnerability data, and population density. This data-driven approach allows for the modeling of different scenarios to identify high-risk areas. By evaluating potential mitigation strategies through a structured framework, authorities can allocate resources more effectively to build community resilience.

NODIA

270. (D) The profitability of the ICT investment.
Efficient deployment of ICT tools relies on factors such as interoperability between different systems, scalability to handle large data volumes, and proper training for personnel. While these technical and organizational considerations are vital for maximizing the impact of the tools, the profitability of the investment is not mentioned as a key requirement for successful disaster management deployment.

271. (C) To provide foundational data for early warning and monitoring.

and satellite phones ensures redundancy and resilience. This comprehensive method recognizes that no single technology is sufficient on its own to reach every individual effectively during an emergency.

255. (C) Creating a resilient and interoperable communication infrastructure.
Implementing effective information and communication technology systems involves significant technical and strategic difficulties. A primary hurdle is the creation of a communication infrastructure that is both resilient against physical damage and interoperable across different agencies. Such a system must withstand disaster impacts while facilitating a coordinated response through seamless information exchange between diverse technological platforms.

256. (B) The application of information science to manage disaster-related data.
Disaster informatics focuses on the specialized application of information science and technology to handle the complexities of data during emergencies. This critical sub-discipline manages various datasets to improve disaster risk reduction efforts. By utilizing advanced information management techniques, practitioners can better understand hazards and vulnerabilities, leading to more effective strategies during the mitigation and preparedness phases.

257. (D) offer interactive and engaging learning experiences for diverse audiences.
Multimedia educational applications enhance risk reduction by offering interactive and engaging learning experiences. These tools utilize diverse formats such as text, graphics, audio, and video to communicate complex information. By catering to various learning preferences and literacy levels, these applications effectively reach diverse populations, including children and non-literate individuals, who might struggle with traditional printed materials.

258. (A) its contextual relevance to the target audience and local hazards.
The success of multimedia educational applications depends heavily on their relevance to the specific local context and the target audience. Effective design requires a deep understanding of socio-cultural characteristics and specific hazard profiles in a given area. This ensures that the provided information is not only received but also culturally understood, prompting proactive and risk-reducing behaviors.

259. (C) Developing an interactive application with visual simulations of storm surge and audio instructions.
To reach communities with varying literacy levels, an interactive application using visual simulations and audio instructions is highly effective. These multimedia tools transcend traditional text-heavy methods by providing engaging and accessible content. By demonstrating risks through animation and audio, the application ensures that complex information is understandable for all members of the population, regardless of their reading ability.

260. (A) Mitigation and Preparedness.
Multimedia educational applications primarily support the mitigation and preparedness phases of the disaster management cycle. These tools empower individuals with the knowledge and skills necessary to protect themselves before an event occurs. By enhancing risk perception and promoting proactive behaviors, these applications help communities reduce their vulnerability and increase their overall readiness for potential hazardous events.

261. (D) The failure of alerts to reach vulnerable and remote populations.
In the context of alerting technologies, the last-mile connectivity problem refers to the failure of warnings to reach remote or highly vulnerable populations. Despite having sophisticated systems, ensuring that every individual receives critical information remains a challenge. Addressing this requires integrating multiple communication channels to bridge the gap between central alerting authorities and people in isolated geographic locations.

262. (B) clarity, conciseness, and actionability of the message content.
Future developments in alerting systems must prioritize the quality of the message content to ensure effective public responses. This involves creating instructions that are clear, concise, and actionable for diverse populations. By focusing on culturally appropriate messaging that avoids

Click Here to Buy book on Amazon

insights. Maintaining a resilient network design is essential for ensuring the continuity of data flow during severe environmental events.

280. (D) The creation of data gaps at the most critical moments.
Because sensors are often susceptible to damage during the very events they monitor, the most direct consequence is the creation of data gaps at critical moments. When individual sensors fail or stop transmitting, decision-makers lose access to real-time information when it is most needed. This vulnerability highlights the importance of building redundant and resilient networks to maintain situational awareness.

281. (A) the specific environmental risks and topography of the area.
The design of a sensor network must be specifically tailored to the environmental risks being monitored and the topography of the area. Strategic placement is essential to ensure optimal coverage of hazard-prone regions while considering factors like accessibility for maintenance and communication pathways. This tailored approach ensures that the network effectively captures data relevant to the specific local threats.

282. (B) It is more dynamic, often involving mobile sensors.
Deployment for emergency and rescue operations is more dynamic than static monitoring, frequently utilizing mobile sensors. These devices can be attached to vehicles, drones, or rescue personnel to provide immediate situational awareness in the aftermath of a disaster. This flexibility allows response teams to gather real-time data from changing environments, aiding in the location of survivors and damage assessment.

283. (B) To process sensor data for analysis, alerting, and decision support.
The computing infrastructure serves as the engine that processes vast streams of data collected by sensor networks. Its principal functions include ingesting, storing, and analyzing heterogeneous data in real-time to detect anomalies and trigger alerts. This rapid processing capability is essential for supporting decision-making during emergency operations, such as directing rescue teams to areas of greatest potential damage.

284. (A) Processing seismic data to generate shake maps that direct rescue teams to the most affected zones.
Effective use of sensor data involves processing seismic information to generate shake maps that guide rescue teams to the most affected zones. By rapidly analyzing data from multiple sensors, the computing infrastructure can identify areas of maximum damage. This allows authorities to allocate resources efficiently and direct ground teams to locations where they can be most effective in saving lives.

285. (C) the successful integration of sensor deployment, data transmission, and rapid data processing.
The effectiveness of a sensor-based system for emergency response results from the successful integration of sensor deployment, data transmission, and rapid data processing. A well-designed system must not only collect data but also ensure that the information is transmitted reliably and analyzed quickly. This comprehensive synergy allows authorities to turn raw sensor readings into actionable insights for rescue operations.

286. (D) To analyze data to find patterns and generate predictive insights.
Machine learning provides the analytical power required to sift through vast Big Data sets to uncover hidden patterns and predictive insights. By analyzing complex information from sources like satellite imagery and sensor networks, machine learning algorithms can improve the accuracy of forecasts and damage assessments. This enables authorities to make more informed decisions during all phases of disaster management.

287. (C) Traditional databases cannot handle the volume, velocity, and variety of disaster-related data.
Advanced database management is essential for Big Data because traditional systems cannot handle the extreme volume, velocity, and variety of disaster-related information. These modern databases are designed to store and organize heterogeneous data from disparate sources, such as social media and sensor feeds. Without this infrastructure, the analytical potential of Big Data and machine learning cannot be fully realized.

Downloaded from www.pdf.tube

CHAPTER 10

Emergency Response and Management

1. What does the acronym SOP stand for in the context of disaster response?
(A) Strategic Operation Plan
(B) Standard Operating Procedures
(C) Systemic Overview Process
(D) Special Operations Protocol

2. Which of the following best describes the primary function of a first responder in a disaster situation?
(A) To provide immediate assistance and initial care to victims.
(B) To conduct a detailed damage assessment for insurance purposes.
(C) To coordinate international relief aid and logistics.
(D) To document the event for media and public affairs.

3. Match the items in List I with those in List II and select the correct option regarding the principles of First Aid Triage.
List I: (Triage Category/Color)
P. Red
Q. Yellow
R. Black
S. Green
List II: (Patient Condition)
1. Deceased or expectant
2. Minor injuries, walking wounded
3. Immediate, life-threatening injuries
4. Delayed, serious but not life-threatening injuries
(A) P-3, Q-4, S-2, R-1
(B) P-4, Q-3, S-1, R-2
(C) P-3, Q-2, S-4, R-1
(D) P-1, Q-4, S-2, R-3

4. Which of the following statements about Emergency Operation Centers (EOC) is incorrect?
(A) An EOC is a central command and control facility for emergency management.
(B) It is responsible for carrying out strategic decision-making and ensuring continuity of operations.
(C) It facilitates coordination between different responding agencies and departments.
(D) An EOC is typically located in the field, directly at the disaster site.

NODIA

5. What is the primary purpose of Basic Life Support (BLS)?
(A) To diagnose and manage complex medical conditions in the field.
(B) To provide advanced surgical interventions and critical care on-site.
(C) To maintain vital life functions until advanced medical help arrives.
(D) To administer specialized prescription medications to accident victims.

6. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : Effective risk communication is a critical component of disaster management, particularly in the pre-disaster phase.
Reason (R) : Well-designed risk communication can enhance hazard awareness and encourage the adoption of protective behaviors by the public.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

7. Which of the following is NOT a primary objective of mass media in a humanitarian crisis?
(A) To inform the public about the disaster and safety measures.
(B) To facilitate fundraising and resource

296. (D) Its capacity for instantaneous, multi-directional communication.
The primary strength of social media in disaster management is its capacity for instantaneous, multi-directional communication. These platforms allow for the rapid exchange of information between official agencies and the public. During a crisis, this two-way engagement facilitates the real-time dissemination of warnings while also allowing affected populations to contribute vital on-the-ground updates for situational awareness.

297. (A) official dissemination by authorities and a source of crowdsourced information from the public.
Social media plays a dual role as a tool for official information dissemination by authorities and a source of crowdsourced data from the public. Official agencies use these platforms to share safety instructions, while individuals can report incidents and request help. This interactive model creates a rich information ecosystem that enhances the situational awareness of response agencies during an emergency.

298. (B) The rapid and widespread dissemination of misinformation and rumors.
A significant challenge in using social media for disaster response is the rapid and widespread dissemination of misinformation and rumors. False narratives can cause public panic and lead to the misdirection of critical resources. Managing these risks requires authorities to establish mechanisms for monitoring and verifying information to ensure that only accurate data guides the response efforts.

299. (B) By analyzing verified, user-generated reports, photos, and help requests from different areas.
Social media can aid earthquake response by allowing agencies to analyze verified, user-generated reports, photos, and help requests. This crowdsourced information provides a layer of situational awareness that helps identify the most affected neighborhoods. When properly verified, these on-the-ground updates enable authorities to allocate resources more effectively to the areas where the needs are most urgent.

300. (A) They must have a system in place to verify information and counter false narratives.
Disaster management agencies must implement systems to verify information and counter false narratives on social media. While these platforms offer immense potential for rapid communication and crowdsourcing, they also risk spreading misinformation. Robust monitoring mechanisms are necessary to ensure that authorities can validate user-generated content and provide accurate guidance to the public during a crisis.

www.nodia.in

Click Here to Buy book on Amazon

Sensor technologies play a fundamental role in disaster risk reduction by providing the foundational data required for early warning systems and environmental monitoring. These devices detect and measure physical phenomena that indicate impending hazards. By transmitting this information in real-time for analysis, they enable authorities to issue timely warnings and implement protective measures before a disaster occurs.

272. (B) GPS stations – Measuring crustal deformation.
Different sensors are specifically designed to monitor various environmental risks and natural hazards. According to the text, GPS stations are used to measure crustal deformation, which can indicate tectonic activity. Other examples include seismometers for detecting ground motion, river gauges for tracking water levels during floods, and meteorological sensors for monitoring atmospheric conditions during severe storms.

273. (D) a more comprehensive understanding of a threat's evolution over space and time.
Systematic deployment of sensors as a network provides a comprehensive, spatio-temporal understanding of evolving environmental threats. Unlike a single device, a network can monitor hazards across large areas and track their development over time. This integrated approach allows for a more detailed analysis of anomalous patterns, shifting the focus from post-disaster response to pre-disaster preparedness.

274. (A) A system of seismometers and GPS stations to detect ground motion and deformation.
To improve earthquake warnings, a geological survey agency should invest in a system of seismometers and GPS stations. Seismometers are essential for detecting ground motion, while GPS stations measure the crustal deformation that often precedes or accompanies seismic events. Integrating these sensors into a network allows for real-time data analysis and the issuance of timely alerts to the public.

275. (C) reactive response to proactive preparedness and mitigation.
The analysis of real-time data from sensor networks allows disaster management to shift from a reactive response to proactive preparedness and mitigation. By identifying anomalous patterns that signal impending hazards, authorities can issue warnings and take protective actions earlier. This paradigm shift focuses on understanding threats as they evolve, thereby reducing the impact of disasters through better planning.

NODIA

276. (A) Their ability to provide objective, quantitative data in near real-time.
The primary benefit of using sensor systems, such as remote sensing satellites or ground-based devices, is their ability to provide objective, quantitative data. These systems can monitor large geographic areas in near real-time, facilitating continuous observation of hazards like wildfires and floods. This data is crucial for maintaining situational awareness and making informed decisions during rapidly changing disaster scenarios.

277. (D) specific focus, which provides an incomplete picture of the overall risk.
A significant limitation of relying on a single type of sensor system is its specific focus, which often results in an incomplete picture of the overall risk. For instance, a rain gauge tracks precipitation but does not provide information regarding ground saturation or landslide potential. This narrow scope necessitates the integration of multiple sensor types to achieve a comprehensive understanding.

278. (B) It involves integrating data from multiple sensor types and ensuring network redundancy.
Efficient use of sensor technologies involves the integration of data from multiple sensor types and the creation of redundant, resilient network designs. By combining different data sources, such as satellite imagery and ground sensors, authorities can develop a more robust understanding of evolving risks. Redundancy ensures that information continues to flow even if individual sensors fail during a disaster.

279. (C) By designing a redundant network and integrating satellite data on rainfall.
To mitigate the impact of damaged equipment during a storm, agencies should design redundant networks and integrate data from multiple sources, such as satellites. This approach ensures that if ground-based river gauges fail, other information streams can still provide critical

mobilization for relief efforts.
(C) To hold authorities accountable for their response actions.
(D) To generate revenue through sensationalized reporting of victim stories.

8. Consider the following statements regarding the Incident Response System (IRS):
I. It provides a standardized on-scene emergency management construct.
II. It is designed to be used only for large-scale, multi-agency disasters.
III. The structure of IRS is based on five major functional areas: Command, Operations, Planning, Logistics, and Finance/ Administration.
IV. It hinders integration of personnel from different agencies.
Which of the above statements are correct?
(A) I and III only
(B) II and IV only
(C) I, II, and III only
(D) I and IV only

9. The concept of using existing structures like schools or community halls for temporary housing immediately after a disaster refers to:
(A) Self-sheltering populations
(B) Intermediate shelter
(C) Short-term shelter in existing buildings
(D) Longer-term emergency settlements

10. What is the primary role of Community Based Organizations (CBOs) in the emergency response mechanism?
(A) To leverage local knowledge and resources for immediate relief.
(B) To enforce strict law and order within the disaster-affected area.
(C) To provide long-term international funding for urban reconstruction.
(D) To conduct official scientific research on the disaster's long-term impact.

11. A person has a deep cut with profuse bleeding. According to First Aid principles, what is the most appropriate initial action?
(A) Apply a tourniquet immediately above the site of the wound.
(B) Wash the wound thoroughly using warm soap and sterile water.
(C) Give the person water to drink to prevent systemic dehydration.
(D) Apply direct, firm pressure on the wound with a clean cloth.

12. Which of the following statements about Emergency Support Functions (ESFs) is correct?
(A) ESFs are a rigid set of rules that must be followed in every disaster.
(B) ESFs provide a structure for coordinating inter-agency incident support.
(C) Each ESF is independently managed by specific government departments.
(D) ESFs are primarily activated for large-scale public health emergencies.

13. Given the following phases of media reporting on a disaster:
I. Preparedness and mitigation reporting
II. Immediate post-impact coverage
III. Reconstruction and recovery reporting
IV. Warning and impending threat coverage
What is the typical chronological order of these phases?
(A) I, IV, II, III
(B) IV, I, II, III
(C) I, II, IV, III
(D) II, IV, I, III

14. The "Sender and Receiver Oriented Views" in communication models as applied to disaster management primarily differ in their emphasis on:
(A) The technology used for message transmission.
(B) The role of feedback and shared meaning creation.
(C) The speed of information dissemination.
(D) The influence of noise and external interference.

15. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : The India Disaster Resource Network (IDRN) is a manually updated directory of resources available only at the national level.
Statement II : The IDRN is a web-based platform designed to be a nationwide inventory of equipment, skilled human resources, and critical supplies for emergency response.

Downloaded from www.pdf.tube

and control public perception.

61. In the context of disaster communication, which of the "Seven Traditions" is most concerned with information processing, feedback, and reducing uncertainty, making it highly relevant to the functioning of an EOC?
(A) The Rhetorical Tradition
(B) The Critical Tradition
(C) The Cybernetic Tradition
(D) The Phenomenological Tradition

62. A key challenge in media coverage of disasters is the tendency towards "biases and stereotypes," which can include:
(A) Portraying all disaster survivors as heroic and resilient.
(B) Giving equal airtime to all affected communities, regardless of their size.
(C) Providing in-depth, long-term coverage of the recovery process.
(D) Focusing disproportionately on sensational aspects like looting while ignoring community solidarity.

63. Which type of triage system is commonly used in pre-hospital mass casualty incidents?
(A) Simple Triage and Rapid Treatment (START)
(B) Advanced Trauma Life Support (ATLS)
(C) Hospital Admission Triage
(D) Elective Surgery Scheduling System

64. Given the following components of the Basic Life Support (BLS) chain of survival for an out-of-hospital cardiac arrest:
I. Rapid defibrillation
II. Early CPR with an emphasis on chest compressions
III. Immediate recognition of cardiac arrest and activation of the emergency response system
IV. Advanced life support and post-cardiac arrest care
What is the correct sequence of these steps?
(A) III, II, I, IV
(B) I, II, III, IV
(C) II, III, I, IV
(D) III, I, II, IV

65. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : An Emergency Operation Center (EOC) is the primary location for hands-on search and rescue activities.
Statement II : An EOC serves as a centralized coordination center for information management, resource allocation, and strategic decision-making during a disaster.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

66. What is the most appropriate action for a first responder encountering an unconscious person?
(A) Check for responsiveness and breathing.
(B) Immediately start giving water.
(C) Shake the person vigorously to wake them up.
(D) Leave the person alone as they may be sleeping.

67. Consider the following:
I. Radio broadcasts
II. Social media updates
III. Door-to-door warnings by volunteers
IV. Public address systems on vehicles
V. Religious leaders' announcements in places of worship
Which of the above can be used as tools for warning dissemination in a community?
(A) I and II only
(B) I, II, and IV only
(C) III and V only
(D) I, II, III, IV, and V

NODIA

68. The primary purpose of a "Hospital emergency disaster management plan" is to:
(A) Outline the process for evacuating the hospital for demolition.
(B) Create a marketing strategy for the hospital during non-emergency times.
(C) Document the hospital's history and achievements.
(D) Detail a plan for the hospital to continue

23. Which of the following is NOT a primary component of a Hospital Emergency Disaster Management Plan?
(A) Procedures for surge capacity management
(B) Plans for staff scheduling and responsibilities during the crisis
(C) Protocols for communication and coordination with other health facilities
(D) A marketing plan to attract more patients during the disaster

24. A key feature of an Information Management System in disaster response is to:
(A) Ensure the right information is available to the right people at the right time.
(B) Restrict all information flow to the highest level of command.
(C) Focus solely on collecting data after the response is complete.
(D) Replace the need for human decision-makers in the EOC.

25. Consider the following statements about disaster response:
I. Evacuation is the process of moving people away from a threatened area to a safer location.
II. Relief operations focus on long-term reconstruction and economic recovery.
III. Search and Rescue operations are aimed at locating and extricating survivors.
IV. The Incident Response System is a rigid hierarchy unsuitable for dynamic situations.
Which of the above statements are correct?
(A) I and II only
(B) I and III only
(C) II and IV only
(D) III and IV only

26. The term 'Health in Emergencies' refers to:
(A) The organized response to mitigate health impacts on populations.
(B) The state of physical and mental well-being for response workers.
(C) The specialized study of diseases that only occur during disasters.
(D) The financial and strategic management of hospitals during a crisis.

27. The concept of 'cultural influences on risk communication' implies that:
(A) All cultures perceive and react to risk in a universally uniform manner.
(B) Culture is an irrelevant factor in modern, technology-driven communication.
(C) Only written communication forms are affected by cultural differences.
(D) Strategies must be adapted to the cultural context of the target audience.

28. In the context of disaster communication, which of the following represents a "sender-oriented" view?
(A) A public meeting where community members' concerns are heard and addressed.
(B) A television broadcast that delivers a one-way warning message from authorities.
(C) A two-way radio system used for dialogue between responders and a community leader.
(D) A social media campaign that actively responds to user comments and questions.

29. Given the basic steps of providing First Aid:
I. Call for professional medical help.
II. Assess the situation for any dangers to yourself or the victim.
III. Provide specific care as needed (e.g., control bleeding, support fracture).
IV. Perform a primary survey of the victim (check for responsiveness, breathing).
What is the correct sequence of these steps?
(A) I, II, IV, III
(B) II, IV, I, III
(C) IV, III, II, I
(D) II, I, IV, III

30. The primary goal of vector and pest control in emergency settlements is to:
(A) Improve the aesthetic appearance of the camp.
(B) Provide a source of protein for the sheltered population.
(C) Test new types of insecticides and pesticides.
(D) Prevent the outbreak and spread of vector-borne diseases.

31. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : Reporting on disaster issues and challenges is free from biases and stereotypes in

Click Here to Buy book on Amazon

modern media.

Statement II : Media coverage can sometimes perpetuate stereotypes by over-emphasizing looting and chaos or portraying victims as helpless.

(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

32. The process of identifying and handling human remains after a disaster is crucial for all the following reasons EXCEPT:

(A) Providing closure and respecting the rights of the deceased and their families.
(B) Preventing the immediate outbreak of a major epidemic from dead bodies.
(C) Legal and administrative purposes, such as issuing death certificates.
(D) Collecting data for accurate casualty figures and victim identification.

33. Consider the following actions taken during an emergency response:

I. Deploying medical staff to a field hospital.
II. Procuring and distributing heavy equipment for debris removal.
III. Establishing communication links between various agencies.
IV. Providing food and water to the affected population.
V. Compiling and sharing situational reports within the EOC.

Which of these actions fall under the broad category of 'Resource Management & Networking'?

(A) I, II, and IV only
(B) III and V only
(C) I, II, III, IV, and V
(D) I and V only

34. What is the fundamental difference between 'Hazard Awareness' and 'Risk Perception'?

(A) Hazard awareness is knowing a threat exists, while risk perception is the subjective judgment about its severity and likelihood.
(B) Risk perception is the scientific measurement of a hazard, while hazard awareness is a cultural belief.
(C) There is no difference; the terms are synonymous in disaster management.
(D) Hazard awareness applies to natural disasters, while risk perception applies to man-made disasters.

35. The term 'intermediate shelter' refers to a form of shelter that is:

(A) A permanent house built as part of the reconstruction phase.
(B) A personal tent a family brings with them during evacuation.
(C) A transitional solution bridging emergency and permanent housing.
(D) A community building used for only the first 24 hours of disaster.

36. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.

Assertion (A) : The Incident Response System (IRS) enhances interoperability among different response agencies.

Reason (R) : IRS provides a common terminology, organizational structure, and set of procedures for all responders to use during an incident.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

37. Which of the following is a primary consideration in site selection and arrangement for an emergency settlement?

(A) Proximity to a major tourist destination.
(B) Availability of luxury amenities for the displaced population.
(C) Ensuring adequate drainage and avoiding low-lying, flood-prone areas.
(D) The site's potential for future commercial development.

38. Match the items in List I with those in List II and select the correct option regarding the

NODIA

Seven Traditions of Communication and their relevance to Disaster Management (DM).

List I: (Tradition)

P. Rhetorical
Q. Cybernetic
R. Critical
S. Socio-cultural

List II: (Relevance/Focus in DM)

1. How communication creates and recreates social order and cultural patterns in disaster-stricken communities.
2. Questioning power structures and exposing inequalities in disaster communication and aid distribution.
3. The art of public address and persuasion in delivering effective warning messages.
4. Information processing and flow within the Emergency Operation Center (EOC).

(A) P-1, Q-2, S-3, R-4
(B) P-3, Q-4, S-1, R-2
(C) P-3, Q-1, S-4, R-2
(D) P-4, Q-3, S-2, R-1

39. The process of sorting and prioritizing patients based on the urgency of their need for care is known as:
(A) Evacuation
(B) Triage
(C) Relief
(D) Rescue

40. Which of the following is NOT a valid ethical issue in disaster communication?
(A) Using the most technologically advanced communication channel regardless of accessibility.
(B) Respecting the privacy and dignity of victims.
(C) Ensuring the accuracy and timeliness of information.
(D) Avoiding sensationalism and graphic imagery.

41. Consider the following statements regarding a Hospital Safety and Preparedness Plan:
I. It must include provisions for both structural and non-structural safety.
II. It should be developed in isolation from local emergency services.
III. It needs to address continuity of essential services like power and water.
IV. Staff training and drills are a critical component of the plan.

Which of the above statements are correct?
(A) I, II, and III only
(B) II and IV only
(C) I, III, and IV only
(D) I, II, and IV only

NODIA

42. What is the most appropriate description of "self-sheltering populations"?
(A) People who find their own shelter solutions, often by staying with relatives or in second homes.
(B) People who refuse to evacuate and stay in their damaged homes.
(C) People who build their own temporary shelters using salvaged materials.
(D) People who are housed in official, government-run emergency shelters.

43. Which of the following describes the role of a 'Health Emergency Team'?
(A) A group of accountants managing hospital finances during a crisis.
(B) A team of engineers assessing structural damage to health facilities.
(C) A committee responsible for public relations for the health ministry.
(D) A deployable team of health professionals trained for emergencies.

44. A "normative perspective" on disaster communication focuses on:
(A) How communication actually occurs in practice, with all its flaws.
(B) The ideal, ethical, and most effective ways communication should occur.
(C) The historical evolution and development of communication technologies.
(D) The statistical analysis of message frequency and audience reach.

45. The India Disaster Resource Network (IDRN) is a key component of which aspect of emergency response?
(A) Search and Rescue operations
(B) Warning Dissemination
(C) Resource Management & Networking
(D) First Aid Triage

(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

16. Which of the following is the best example of "Alternative Media" during a crisis?
(A) A national television news broadcast.
(B) A community radio program run by local volunteers.
(C) A government-issued press release.
(D) A front-page article in a major international newspaper.

17. Consider the following issues related to emergency settlements:
I. Access to clean water and sanitation
II. Provision of livelihood opportunities
III. Long-term governance and community participation
IV. Vector and pest control measures
V. Integration with host communities
Which of the above are considered longer-term issues for emergency settlements?
(A) I and IV only
(B) II, III, and V only
(C) I, IV, and V only
(D) I, II, III, IV, and V

18. What is the primary purpose of a Public Health Emergency Operations Centre (PHEOC)?
(A) To coordinate the public health response to an emergency.
(B) To perform complex surgical procedures during a disaster event.
(C) To manufacture and stockpile vaccines for future global pandemics.
(D) To provide routine, non-emergency healthcare services to the public.

19. "Newsworthiness" in the context of disaster reporting is determined by factors such as:
(A) The personal opinions of the reporter
(B) The cost of covering the story
(C) Timeliness, proximity, and impact
(D) The availability of government funding for the media outlet

20. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : In Mass Casualty Management, the goal is to provide the best possible care to every single patient, irrespective of the resource constraints.
Reason (R) : The guiding principle of Mass Casualty Management is to do the greatest good for the greatest number of people with the available resources.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

21. Which communication theory suggests that individuals' perception of risk is shaped by the values they share with others in their social groups?
(A) Sender-Receiver Model
(B) Normative Perspective on Communication
(C) Cultural Cognition Theory of Risk
(D) Agenda-Setting Theory

22. Match the items in List I with those in List II and select the correct option concerning social media applications in disaster management.
List I: (Social Media Tool)
P. Twitter
Q. Facebook
R. Google Person Finder
S. Ushahidi
List II: (Primary Use in Crisis)
1. Crowdsourced mapping of crisis information
2. Database for tracking missing persons
3. Rapid dissemination of short official updates and real-time news
4. Creating community groups and safety check-ins
(A) P-1, Q-2, S-3, R-4
(B) P-3, Q-4, S-1, R-2
(C) P-3, Q-1, S-4, R-2
(D) P-4, Q-3, S-2, R-1

Downloaded from www.pdf.tube

response.

Reason (R) : Supporting those who have found their own temporary accommodation can prevent them from becoming a drain on public shelters and can speed up their recovery.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

54. The concept of "continuity" in the context of Emergency Health Services planning means:
(A) Providing the same doctor for a patient throughout the emergency.
(B) Ensuring that routine and essential health services are not completely disrupted during an emergency.
(C) Using only traditional and continuous medical practices.
(D) Continuing the emergency response indefinitely.

55. Match the items in List I with those in List II and select the correct option.
List I: (Emergency Response Action)
P. Evacuation
Q. Search and Rescue
R. Warning Dissemination
S. Relief Operations
List II: (Primary Objective)
1. To locate, extricate, and provide initial medical stabilization to entrapped survivors.
2. To provide life-sustaining resources like food, water, and shelter to the affected population.
3. To inform the public about an impending threat and advise on safety measures.
4. To move people and property from threatened areas to safer locations.
(A) P-4, Q-1, S-2, R-3
(B) P-1, Q-4, S-3, R-2
(C) P-4, Q-2, S-1, R-3
(D) P-2, Q-1, S-4, R-3

56. Which of the following is NOT a feature of the Incident Response System (IRS)?
(A) Permanent, fixed hierarchical structure
(B) Manageable Span of Control
(C) Common Terminology
(D) Unity of Command

57. "Disaster warnings as risk communication" implies that warnings should not just state the hazard but also:
(A) Be communicated in a highly technical, scientific language.
(B) Be issued only after the disaster has struck.
(C) Include specific information on what people can do to protect themselves.
(D) Focus on blaming individuals for their lack of preparedness.

58. Consider the following statements about Emergency Support Functions (ESFs):
I. ESFs are organized groups of government and private-sector entities.
II. The ESF framework is used to coordinate a response for a specific functional area.
III. An example of an ESF could be "Transportation" or "Public Health and Medical Services".
IV. The ESF structure is only applicable to international disasters.
Which of the above statements are correct?
(A) I and IV only
(B) II and III only
(C) I, II, and III only
(D) II, III, and IV only

NODIA

59. The primary principle of "handling of injured persons" in pre-hospital care is:
(A) Move the person as quickly as possible, regardless of injury.
(B) Ask the person to stand up and walk to test for injuries.
(C) Provide food and drink immediately to restore their energy.
(D) Avoid any unnecessary movement, especially if a spinal injury is suspected.

60. What is the main purpose of "Media Relations during Emergency Situations"?
(A) To prevent the media from reporting on the disaster.
(B) To provide accurate, timely, and coordinated information to the media for public dissemination.
(C) To sell exclusive story rights to the highest-bidding media house.
(D) To use the media to spread disinformation

46. In the context of Mass Casualty Management, what is the primary objective?
(A) To provide comprehensive, long-term care to every single casualty.
(B) To rapidly transport all casualties to the nearest medical facility.
(C) To prioritize casualties based on their social or economic status.
(D) To manage resources to provide care for a large number of victims.

47. Given the following actions in the process of handling and identifying human remains post-disaster:
I. Secure and respectful recovery of the body from the site.
II. Transportation to a designated mortuary facility.
III. Ante-mortem data collection from families.
IV. Post-mortem examination and data collection (forensic identification).
V. Reconciliation of ante-mortem and post-mortem data for identification.
Which of the following is the logical sequence of these actions?
(A) I, II, IV, III, V
(B) III, I, II, V, IV
(C) I, III, II, IV, V
(D) II, I, IV, III, V

48. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : Effective warning dissemination relies solely on a single, powerful broadcast from a central authority.
Statement II : A multi-channel approach, using sirens, mobile alerts, TV, radio, and community messengers, is generally more effective for warning dissemination.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

49. What is meant by "Wound Management" in pre-hospital care?
(A) Performing complex surgery to repair a wound.
(B) The set of actions to clean, treat, and dress a wound to prevent infection and control bleeding.
(C) Documenting the size and location of all wounds for official records.
(D) Administering antibiotics to the patient before reaching a hospital.

50. Consider the following:
I. Warning Dissemination
II. Evacuation
III. Search and Rescue
IV. Relief Operations
V. First Aid
Which of the above are considered core components of the Emergency Response phase?
(A) I, II and III only
(B) I, II, III and IV only
(C) V only
(D) I, II, III, IV, and V

51. The role of media in a humanitarian crisis includes all of the following EXCEPT:
(A) Acting as a watchdog on government and relief agency performance.
(B) Providing a platform for affected people to voice their needs and concerns.
(C) Directing and managing the official search and rescue operations.
(D) Disseminating information on health risks and safety precautions.

52. The "Checklist for Disaster Reporting" is a tool designed to help journalists:
(A) Negotiate higher salaries for covering dangerous assignments.
(B) Decide which disaster is most 'newsworthy'.
(C) File their expense reports correctly after an assignment.
(D) Ensure they cover key aspects of the story accurately and ethically.

53. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : Assistance to self-sheltering populations is an important, though often overlooked, aspect of emergency shelter

Click Here to Buy book on Amazon

functioning and manage a surge of patients during a disaster.

69. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.

Assertion (A) : Cultural cognition theory posits that people's perception of risk is often influenced by their group identities and worldviews.

Reason (R) : This means that presenting the same scientific data about a hazard to different cultural groups may result in very different levels of concern and willingness to act.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

70. Which of these is NOT a role of Disaster Response Forces?

(A) Specialized search and rescue operations.
(B) Providing long-term housing and reconstruction grants.
(C) Assisting in community awareness and capacity building.
(D) Providing emergency medical support and first aid.

71. Match the items in List I with those in List II and select the correct option regarding the roles in disaster communication.

List I: (Entity)
P. Media
Q. Emergency Manager
R. Scientist/Technical Expert
S. Community Leader

List II: (Primary Communication Role)
1. To build trust and mobilize local action, translating official messages into a local context.
2. To provide accurate, simplified explanations of the hazard and its risks.
3. To act as a Public Information Officer, providing timely and verified information to the media and public.
4. To disseminate information widely, act as a watchdog, and provide a platform for public voice.

(A) P-1, Q-2, S-3, R-4
(B) P-4, Q-3, S-1, R-2
(C) P-4, Q-1, S-3, R-2
(D) P-2, Q-3, S-1, R-4

72. "Phases of Disaster Reporting" refers to:

(A) The way media coverage evolves from pre-disaster warnings to post-disaster recovery stories.
(B) The different technical formats for media broadcast (e.g., SD, HD, 4K).
(C) The various stages of a journalist's career.
(D) The approval process for a news story within a media organization.

73. The concept of "hazard adjustment and adoption" is influenced by:

(A) The color of the hazard warning flags used by the government.
(B) The time of day the disaster occurs.
(C) The individual's perception of risk and their belief in the effectiveness of protective measures.
(D) The number of journalists covering the event.

74. Consider the following statements regarding First Aid Triage:

I. It aims to do the greatest good for the greatest number of people.
II. Patients with minor injuries are treated first to clear the area.
III. Patients are sorted into categories based on the urgency of their treatment needs.
IV. The 'Black' category is for those who require immediate surgery.

Which of the above statements are correct?

(A) I and III only
(B) II and IV only
(C) I, II, and III only
(D) I and IV only

NODIA

75. What is the primary function of an Information Management System within an Emergency Operation Center (EOC)?

(A) To block external communication to avoid rumors.
(B) To exclusively manage the payroll for emergency responders.
(C) To provide entertainment and news updates

for EOC staff.
(D) To collect, process, analyze, and disseminate incident-related information.

76. The main advantage of using social media tools like Twitter during a disaster is:
(A) The guarantee that all information shared is 100% accurate and verified.
(B) The ability to disseminate information rapidly to a wide audience and receive real-time updates from the ground.
(C) The complex, lengthy format that allows for detailed scientific explanations.
(D) Its accessibility to all populations, including the elderly and those in remote areas without internet.

77. An emergency settlement has been established. Which of the following would be considered a primary vector and pest control measure?
(A) Planting decorative gardens around the shelters.
(B) Providing televisions in every shelter.
(C) Proper management of solid waste and drainage systems.
(D) Organizing a sports festival for the residents.

78. Which statement best defines the role of communication in disaster management?
(A) Communication is a secondary activity, only important for public relations after the event.
(B) Communication in disasters is exclusively about giving orders from commanders to subordinates.
(C) The role of communication is limited to issuing a single evacuation warning.
(D) Communication is a critical, cross-cutting function essential in all phases of the disaster management cycle.

79. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : Prehospital care refers to any medical care provided to a patient before they arrive at a hospital.
Statement II : Prehospital care is only performed by specialist doctors in mobile operating theaters.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

80. "Access for Emergency Health Services" in a disaster context primarily refers to ensuring that:
(A) Only the wealthiest patients can access private hospitals.
(B) Ensuring affected populations can reach and receive health services.
(C) Health workers can access the internet for personal use during shifts.
(D) Journalists have unrestricted access to all patient medical records.

81. Which of the following represents a significant ethical challenge in media coverage of disasters?
(A) Showing maps of the affected area.
(B) Broadcasting an interview with an identifiable, grieving survivor without their informed consent.
(C) Reporting the official death toll provided by authorities.
(D) Explaining the scientific cause of the disaster.

82. In the context of a Public Health Emergency Operations Centre (PHEOC) framework, what is a key concept?
(A) Centralized command and control for public health assets.
(B) Focusing only on non-communicable diseases during an emergency.
(C) Ensuring each hospital works in complete isolation.
(D) Marketing health services to generate profit.

83. Given the following levels of shelter provision:
I. Permanent Housing
II. Intermediate Shelter
III. Emergency Shelter (e.g., in tents or public buildings)
What is the chronological sequence of these levels from immediate to long-term?
(A) I, II, III
(B) II, III, I

Downloaded from www.pdf.tube

(C) III, II, I
(D) III, I, II

84. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : Hospital Safety and Preparedness is not just about the building's structural integrity but also about its operational readiness.
Reason (R) : A structurally sound hospital is useless in a disaster if it has no plan for managing a surge in patients, no trained staff, and no backup for power and water.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

85. Which of the following is NOT a standard operation procedure (SOP) in a typical disaster response?
(A) Procedure for activating the Emergency Operation Center.
(B) Protocol for requesting and allocating resources.
(C) Guideline for media to choose their own "disaster hero" story.
(D) Step-by-step process for setting up a relief camp.

86. Consider the following statements regarding the role of CBOs in emergency response:
I. They often act as first responders before government help arrives.
II. They have deep knowledge of the local community, its vulnerabilities, and resources.
III. They are typically well-funded international organizations.
IV. Their involvement can enhance the cultural appropriateness and acceptance of relief efforts.
Which of the above statements are correct?
(A) I, II and IV only
(B) I and III only
(C) III and IV only
(D) I, II, III and IV

87. Which model of communication, when applied to disaster management, emphasizes the co-creation of meaning and mutual understanding between authorities and the public?
(A) The linear model
(B) The hypodermic needle model
(C) The sender-focused model
(D) The transactional model

88. The main purpose of a "sources of news" checklist for a disaster reporter is to:
(A) Ensure a variety of voices (officials, experts, victims, responders) are included for a balanced story.
(B) List only the government sources that are approved for quotes.
(C) Keep track of which sources pay for coverage.
(D) Prioritize sources based on their social media following.

89. Match the items in List I with those in List II and select the correct option regarding First Aid for different injuries.
List I: (Type of Injury)
P. Simple fracture of an arm
Q. Minor burn
R. Suspected spinal injury
S. Severe bleeding from a leg wound
List II: (Appropriate First Aid Action)
1. Immobilize the head and neck, do not move the person.
2. Apply direct pressure to the wound.
3. Cool the affected area with running water.
4. Immobilize the limb using a splint or sling.
(A) P-4, Q-3, S-2, R-1
(B) P-1, Q-2, S-3, R-4
(C) P-4, Q-1, S-2, R-3
(D) P-2, Q-3, S-4, R-1

90. Consider the following:
I. Stockpiling medical supplies.
II. Training healthcare workers for disaster scenarios.
III. Developing plans for mass casualty incidents.
IV. Establishing communication protocols between hospitals.
V. Ignoring the mental health needs of responders.
Which of the above are correct components

NODIA

(A) Basic Life Support
(B) Advanced Life System
(C) Bleeding Laceration Stopper
(D) Breathing Lung Sunction

107. Which statement accurately describes a key challenge for longer-term emergency settlements?
(A) The lack of any need for governance or community management.
(B) The problem of having too many resources and volunteers.
(C) The ease of returning all residents to their original homes.
(D) The transition from relief to development and livelihood creation.

108. The 'nature and scope of communication' in disaster management is:
(A) Limited to the response phase only.
(B) Multi-faceted, encompassing all phases from mitigation to recovery, and involving multiple stakeholders.
(C) Unidirectional, from authorities to the public.
(D) Primarily focused on internal communication within government agencies.

109. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : The START triage system uses three criteria for assessment: respiration, perfusion, and mental status.
Statement II : The START triage system is designed for use by highly specialized surgeons in an operating room.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

110. Which is NOT a primary source of news for a journalist reporting on a disaster?
(A) Eyewitness accounts from survivors.
(B) Official briefings from the Emergency Operation Center.
(C) Interviews with first responders and relief workers.
(D) Fictional movies about similar disasters.

111. Consider the following statements regarding Emergency Response:
I. An SOP provides a rigid, unchangeable set of instructions.
II. An Information Management System's goal is to create information overload.
III. First responders include police, fire, and emergency medical personnel.
IV. Evacuation is always a mandatory, forced process.
V. An EOC is a physical or virtual location for coordination.
Which of the above combination of statements is correct?
(A) III and V only
(B) I and II only
(C) III, IV, and V only
(D) I, II, and IV only

112. The most critical aspect of "Hospital Safety and Preparedness" is:
(A) The color of the hospital's exterior paint.
(B) The ability of the hospital to remain functional and provide medical care during and after a disaster.
(C) The size of the hospital's parking lot.
(D) The brand of computers used at the reception desk.

113. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : Vector and pest control are critical components of sanitation in emergency settlements.
Reason (R) : Crowded living conditions, and potential breakdowns in waste management and water systems in settlements, can lead to the proliferation of disease-carrying vectors like mosquitoes and rodents.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.

Click Here to Buy book on Amazon

99. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.

Assertion (A) : A well-resourced media can play a crucial role during a humanitarian crisis by providing life-saving information.

Reason (R) : The primary objective of all mass media during a disaster is to maximize their advertising revenue.

(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

100. In establishing an emergency settlement, what is a critical consideration for 'site arrangement'?
(A) Ensuring all shelters are of different colors for aesthetic diversity.
(B) Placing shelters very close together to save space.
(C) Arranging shelters based on the residents' previous social status.
(D) Planning for fire breaks, access roads, and proximity to water and sanitation facilities.

101. What is the definition of "evacuation" in disaster management?
(A) The process of rescuing trapped individuals from debris.
(B) The provision of food and water to affected populations.
(C) The organized movement of people away from a threat or hazard.
(D) The initial assessment of damage after a disaster occurs.

102. Which of the following is a key component of 'Emergency Health Services' planning?
(A) Reducing the number of trained nurses to save costs.
(B) Ensuring there is a plan for surge capacity in hospitals.
(C) Closing down rural clinics to centralize services.
(D) Limiting access to emergency services to specific groups.

103. Consider the following statements about the role of media in disaster management:
I. Media can act as a bridge between the affected community and response agencies.
II. Media plays a role in public education about disaster risks and preparedness.
III. Media coverage is always objective and free from any external or internal influence.
IV. During a crisis, media can be used to disseminate critical warnings and safety instructions.

Which of the above statements are correct?
(A) I, II and IV only
(B) I and III only
(C) III and IV only
(D) I, II, III and IV

104. The process of "resource management and networking" in disaster response, as exemplified by the IDRN, is designed to:
(A) Create an efficient and transparent system for locating and mobilizing needed resources.
(B) Hide available resources from other agencies to ensure one's own supply.
(C) Sell disaster response equipment to the highest bidder.
(D) Limit resource sharing to maintain control.

105. Match the items in List I with those in List II and select the correct option.

List I: (Term)
P. First Responder
Q. Incident Commander
R. CBO
S. PHEOC

List II: (Description/Function)
1. Manages the overall incident by setting objectives and priorities.
2. A community-level organization leveraging local knowledge for response.
3. The first person to arrive at the scene with emergency training.
4. A coordination hub specifically for public health emergencies.

(A) P-1, Q-3, S-2, R-4
(B) P-3, Q-1, S-4, R-2
(C) P-3, Q-4, S-1, R-2
(D) P-4, Q-1, S-2, R-3

106. In First Aid, what does BLS stand for?

Downloaded from www.pdf.tube

154. Which statement about the India Disaster Resource Network (IDRN) is incorrect?
(A) It is primarily a financial aid distribution platform for victims.
(B) It is a web-based information system.
(C) It aims to create a national inventory of disaster response resources.
(D) It includes data on equipment and skilled human resources.

155. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : In triage, a patient tagged 'Green' requires immediate life-saving intervention.
Statement II : A patient tagged 'Green' is considered 'walking wounded' with minor injuries who can wait for treatment.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

156. The use of Facebook's "Safety Check" feature during a disaster is an application of which of the following?
(A) Emergency Support Functions
(B) Tools for Social Media
(C) First Aid Triage
(D) Vector and Pest Control

157. Which of the following is a longer-term issue for emergency settlements that response planners must consider?
(A) The initial distribution of a 24-hour food pack.
(B) The immediate setup of a first aid post.
(C) The establishment of community governance structures and livelihood support.
(D) The rapid deployment of search and rescue teams.

158. The first 'A' in the first aid acronym DR. ABC (Danger, Response, Airway, Breathing, Circulation) stands for:
(A) Action
(B) Assessment
(C) Ambulance
(D) Airway

159. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : Disaster warnings are most effective when they are specific, consistent, and come from a credible source.
Reason (R) : The public's risk perception is heavily influenced by their trust in the entity issuing the warning.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

NODIA

160. A key objective of the media in a disaster is to help the public understand the scope and scale of the event. This aligns with which primary objective?
(A) To entertain
(B) To inform
(C) To persuade
(D) To advertise

161. Consider the following statements regarding the Incident Response System (IRS):
I. The Incident Commander is responsible for all functions until they are delegated.
II. A key principle is the manageable span of control, typically 1 supervisor to 3-7 subordinates.
III. It uses standardized position titles and common terminology to ensure clarity.
IV. It is an ad-hoc system with no pre-defined roles or structures.
V. It is only used for fires and not for other types of emergencies.
Which of the following combinations of statements is correct?
(A) I, II, and III only
(B) IV and V only
(C) I, IV, and V only
(D) II, III, and IV only

(D) A is false but R is true.

114. The concept of 'seven traditions of communication' is relevant to disaster management because:
(A) It offers multiple perspectives (e.g., rhetorical, cybernetic, critical) for analyzing and improving complex disaster communication processes.
(B) It proves that only one communication theory is useful in a crisis.
(C) It lists seven mandatory channels for warning dissemination.
(D) It is a historical text with no modern relevance.

115. A reporter who focuses only on stories of government failure and ignores successful community-led response efforts may be exhibiting:
(A) Excellent investigative journalism
(B) Ethical reporting
(C) News media bias
(D) Newsworthiness

116. What is the fundamental principle of First Aid Triage?
(A) Treat the least injured first to get them out of the way.
(B) Treat the most senior and important people first.
(C) Treat patients in the order they were found.
(D) Do the greatest good for the greatest number of victims.

117. What is the role of an Incident Response Team?
(A) To manage public relations and media inquiries.
(B) To provide food and beverages to the EOC staff.
(C) To be deployed to an incident to manage the on-scene response.
(D) To conduct post-disaster financial audits.

118. Which of the following best defines a Standard Operation Procedure (SOP) for disaster response?
(A) A flexible guideline that changes with every incident.
(B) A set of pre-established, written instructions for specific tasks.
(C) An academic theory about the nature of disaster response.
(D) A list of all resources available in a particular country.

119. Which of the following is NOT a form of pre-hospital care?
(A) A bystander performing CPR.
(B) A paramedic administering oxygen in an ambulance.
(C) A school nurse dressing a child's scraped knee.
(D) A surgeon performing a heart transplant.

120. A key feature of 'media relations during emergency situations' is the appointment of a:
(A) Public Information Officer (PIO)
(B) Chief Entertainment Officer
(C) Lead Investigative Reporter
(D) Social Media Censor

121. "Cultural cognition" suggests that values influence risk perception. This is relevant to risk communication because:
(A) It shows that some cultures are simply smarter than others.
(B) It suggests that cultural values are irrelevant to risk perception.
(C) It highlights that messages need to be framed for specific value systems.
(D) It means only individualists should be targeted with warning messages.

122. In the context of an emergency settlement, what does 'assistance to self-sheltering populations' typically involve?
(A) Providing them with support like toolkits, cash, or materials to improve their temporary shelter.
(B) Forcing them to move into official camps.
(C) Ignoring them because they have already found a solution.
(D) Taxing them for not using official services.

123. Consider the following tasks:
I. Coordinating helicopter sorties for airlifting survivors.
II. Tracking the inventory of blankets in a warehouse.
III. Maintaining a database of qualified civil engineers for damage assessment.

Click Here to Buy book on Amazon

(D) Hazard adjustment is an involuntary reflex and not a conscious decision.

138. The main purpose of establishing Emergency Support Functions (ESFs) is:
(A) To pre-identify leadership and resources for specific response functions to improve coordination.
(B) To assign blame after a failed response.
(C) To create more bureaucracy in disaster response.
(D) To replace the need for an Incident Commander.

139. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : Short-term shelter in existing buildings like schools is a rapid way to provide mass accommodation.
Statement II : Using existing public buildings for shelter has no long-term consequences and does not disrupt other community services.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

140. Which of the following is an example of an "Alternative Media" outlet playing a role in a crisis?
(A) A primetime news report on a major national network.
(B) A pirate radio station broadcasting survival information when official channels are down.
(C) A press release from the Prime Minister's office.
(D) A paid advertisement in a newspaper from a large corporation.

141. The final phase of disaster reporting, focusing on rebuilding, policy changes, and lessons learned, is known as:
(A) The warning phase
(B) The impact phase
(C) The reconstruction and recovery phase
(D) The sensationalism phase

142. What is the most critical element in wound management in a pre-hospital setting?
(A) Taking a photograph of the wound for documentation.
(B) Determining the exact cause of the wound.
(C) Writing a detailed report on the incident.
(D) Controlling bleeding and preventing infection.

NODIA

143. Consider the following components of a Standard Operation Procedure (SOP) for evacuation:
I. Clear criteria for when to issue an evacuation order.
II. Designated evacuation routes and safe locations.
III. A communication plan to inform the public.
IV. A requirement for evacuees to pay a fee.
Which of the above are correct?
(A) I and II only
(B) IV only
(C) I, II, and III only
(D) I, II, III and IV

144. The key difference between a CBO (Community Based Organization) and an international NGO in disaster response is often:
(A) CBOs use more advanced technology.
(B) CBOs have an inherent local presence and knowledge, while INGOs bring external resources and expertise.
(C) CBOs are exclusively funded by the government.
(D) CBOs only work on long-term development, not response.

145. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The use of social media applications in disaster management has grown significantly.
Reason (R) : Social media provides a one-way, top-down communication channel that is easy for authorities to control.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct

130. The "Critical" tradition of communication, when applied to disaster management, would most likely analyze:
(A) How power imbalances and social inequities are reflected or reinforced in disaster warnings and aid distribution.
(B) The efficiency of information flow in an EOC.
(C) The persuasive techniques used in a public service announcement.
(D) The shared cultural meanings of "disaster" in a community.

131. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : A Public Health Emergency Operations Centre (PHEOC) is essential for a coordinated response to health crises like pandemics or large-scale outbreaks.
Reason (R) : A PHEOC is merely a building and does not contribute to the actual management of a health emergency.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

132. Which of the following is NOT a principle of First Aid Triage?
(A) It is a dynamic process, and patients should be reassessed.
(B) It should be performed quickly to allow for rapid sorting.
(C) It uses a standardized system of tags or colors for easy identification.
(D) It involves providing comprehensive treatment to each person during the sorting phase.

133. Which of the following is a primary objective of Mass Media in the context of disaster management?
(A) To secure exclusive broadcasting rights for commercial gain.
(B) To criticize the government regardless of the response effort.
(C) To educate the public on preparedness and risk reduction measures.
(D) To create panic to increase viewership ratings.

134. Consider the following challenges in disaster reporting:
I. Lack of access to the affected area.
II. Danger to the journalists themselves.
III. Pressure to file stories quickly, sometimes at the expense of accuracy.
IV. Dealing with the emotional trauma of covering the event.
Which of these are recognized "Issues and Challenges" in disaster reporting?
(A) I and III only
(B) II and IV only
(C) III only
(D) I, II, III, and IV

135. What does the term "Resource Networking" in the IDRN context refer to?
(A) Creating a social media network for disaster survivors.
(B) A network of television channels for disaster broadcasting.
(C) A computer network for playing games in the EOC.
(D) Linking various government and non-government entities that hold resources to a common platform.

136. In the context of Mass Casualty Management, the term "surge capacity" refers to a hospital's ability to:
(A) Expand its services and capacity to care for a large influx of patients.
(B) Withstand the physical impact of a disaster like an earthquake.
(C) Generate a surge in its electricity supply.
(D) Quickly evacuate all existing patients.

137. Which statement best reflects the relationship between risk perception and hazard adjustment?
(A) High hazard awareness always leads to appropriate hazard adjustment, regardless of risk perception.
(B) Risk perception has no influence on whether an individual takes protective action.
(C) Individuals who perceive a high level of risk are more likely to adopt protective hazard adjustments.

Downloaded from www.pdf.tube

of "Emergency Medical Preparedness and Response"?
(A) I and V only
(B) II and III only
(C) I, II, III, and IV only
(D) V only

91. Which of the following is a defining feature of the Incident Response System (IRS)?
(A) It uses different terminology for each responding agency to maintain their independence.
(B) It advocates for every responder to report to multiple supervisors to ensure redundancy.
(C) It is only applicable for managing response to natural hazards, not man-made ones.
(D) It employs a modular organization that can expand or contract based on the incident's needs.

92. The effectiveness of a disaster warning is most influenced by the receiver's:
(A) Age and gender exclusively.
(B) Perception of the risk, trust in the source, and understanding of the message.
(C) Favorite television channel.
(D) Political affiliation.

93. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : The primary goal of identifying human remains is rapid disposal to prevent disease outbreaks.
Statement II : The respectful and accurate identification of human remains is a humanitarian imperative, crucial for legal processes and for the mental well-being of grieving families.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

94. What is a key activity during relief operations?
(A) Conducting long-term psycho-social counseling programs.
(B) The construction of permanent, earthquake-proof housing.
(C) Holding elections for a new local government.
(D) The distribution of essential commodities like food, water, and medicine.

NODIA

95. In the context of disaster reporting, "newsworthiness" refers to:
(A) The set of criteria (e.g., impact, timeliness, prominence) that determine if an event is worthy of being reported as news.
(B) The journalist's personal interest in a story.
(C) A government directive on what to report.
(D) The entertainment value of a disaster story.

96. Which of the following is a primary objective of the Emergency Support Function (ESF) framework?
(A) To create competition among response agencies.
(B) To provide a standardized structure for delivering and coordinating necessary support during an incident.
(C) To limit the number of agencies involved in a response.
(D) To ensure that all response activities are profitable.

97. The term "triage systems" in emergency health services refers to:
(A) The billing systems used in hospitals.
(B) Standardized methods and protocols for sorting patients.
(C) The architectural layout of emergency rooms.
(D) The deployment schedule for ambulances.

98. Which of the following is an example of applying a 'normative perspective' to disaster communication?
(A) Criticizing an official press conference for using overly technical jargon that confused the public.
(B) Analyzing the number of tweets sent during a flood.
(C) Describing the historical use of church bells as a warning system.
(D) Mapping the signal strength of a radio station.

explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

146. A "Health Emergency Team" is typically composed of:
(A) A multi-disciplinary group of healthcare professionals like doctors, nurses, and paramedics.
(B) Journalists and public relations experts.
(C) Construction workers and engineers.
(D) Financial auditors and accountants.

147. A "sender-oriented view" of communication, as applied to disaster management, would prioritize:
(A) Ensuring the message is received and understood by the audience.
(B) Generating feedback and dialogue with the affected community.
(C) Crafting the message and transmitting it efficiently.
(D) Co-creating meaning with the receivers.

148. Match the items in List I with those in List II and select the correct option.
List I: (Shelter Term)
P. Self-sheltering
Q. Emergency Shelter
R. Site selection
S. Intermediate Shelter
List II: (Characteristic)
1. Focuses on criteria like safety, water access, and drainage.
2. A durable solution that bridges the gap to permanent housing.
3. Immediate, temporary mass accommodation (e.g., tents, public buildings).
4. Population finds their own solution, e.g., staying with relatives.
(A) P-1, Q-2, S-3, R-4
(B) P-4, Q-3, S-2, R-1
(C) P-4, Q-1, S-3, R-2
(D) P-2, Q-3, S-1, R-4

149. The process of searching for, recovering, and extricating people from collapsed structures or debris is called:
(A) Relief Operations
(B) Evacuation
(C) Search and Rescue Operations
(D) Triage

150. A major challenge in "media relations during emergency situations" is:
(A) The total lack of any media interest in disasters.
(B) Balancing information needs with operational security.
(C) Requirement for all journalists to be first responders.
(D) Having too few official spokespersons for the event.

151. Consider the following statements about Public Health Emergency Operations Centres (PHEOCs):
I. They are based on the principles of the Incident Management System.
II. They facilitate coordination among various public health partners.
III. Their primary role is to provide direct clinical care to patients.
IV. They are crucial for managing information and resources during a health emergency.
Which of the following combinations of statements is correct?
(A) I, II, and IV only
(B) I and III only
(C) III and IV only
(D) I, II, III and IV

152. "Cultural influences on risk communication" means that a message about boiling water during a flood may need to be framed differently. This illustrates that communication must be:
(A) Audience-centered and culturally sensitive.
(B) The same for everyone to ensure fairness.
(C) Delivered only by foreign experts.
(D) Focused only on scientific data.

153. A core principle of handling an injured person, especially with potential neck or back injuries, is:
(A) To help them sit up immediately to assess their condition.
(B) To give them a drink of water to calm them down.
(C) To stabilize the spine and prevent further movement.
(D) To move them to a comfortable chair as quickly as possible.

Click Here to Buy book on Amazon

IV. Sharing a map of inundated areas with all response teams.

How are these tasks primarily managed?

(A) Search and Rescue Operations
(B) An Information Management System
(C) First Aid Triage
(D) Media Relations

124. Given below are two statements. Read the statements and select the correct answer from the options given below.

Statement I : The primary role of Disaster Response Forces is to engage in long-term infrastructure development projects.

Statement II : Disaster Response Forces are specialized units trained for immediate response activities such as search and rescue, medical first response, and clearing access routes.

(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

125. The overview, features, and teams of the Incident Response System (IRS) are designed to create a:

(A) Permanent government department for disaster management.
(B) System for prosecuting those responsible for the disaster.
(C) Standardized and scalable management structure for on-scene operations.
(D) Media production unit for filming the response.

126. The planning and continuity of Emergency Health Services must account for which of the following?

I. Potential damage to health facilities.
II. A sudden influx of a large number of patients (surge capacity).
III. Disruption of supply chains for medicines and equipment.
IV. The health and safety of healthcare workers themselves.
V. The closure of all pharmacies.

(A) I and II only
(B) V only
(C) I, II, III and IV only
(D) III and IV only

127. Which of the following is the most accurate statement regarding the role of media in a humanitarian crisis?

(A) Media can be a powerful partner in response but can also cause harm through misinformation or unethical reporting.
(B) Media is a monolithic entity that always acts responsibly.
(C) The role of media is limited to providing entertainment to distract the affected population.
(D) Official responders should always avoid contact with the media during a crisis.

128. Match the items in List I with those in List II and select the correct option.

List I: (Incident Response System Functional Area)

P. Command
Q. Operations
R. Planning
S. Logistics

List II: (Responsibility)

1. Manages all tactical operations to carry out the response.
2. Provides resources and all other services needed to support the incident.
3. Collects, evaluates, and disseminates information; develops the Incident Action Plan.
4. Sets the incident objectives and has overall responsibility.

(A) P-4, Q-1, S-2, R-3
(B) P-1, Q-4, S-3, R-2
(C) P-4, Q-2, S-1, R-3
(D) P-2, Q-1, S-4, R-3

129. A key difference between 'emergency shelter' and 'intermediate shelter' is:

(A) The color of the shelter material.
(B) The duration of use and level of durability.
(C) Emergency shelters are only for individuals, while intermediate are for families.
(D) There is no difference; the terms are used interchangeably.

NODIA

162. One of the main reasons for establishing an Emergency Operation Center (EOC) is to:
(A) Facilitate inter-agency coordination and resource management.
(B) Provide a single point of contact for media.
(C) Serve as a shelter for the general public.
(D) Store relief supplies for long-term use.

163. The primary difference between Search and Rescue (SAR) and Relief Operations is:
(A) SAR is conducted by CBOs, while Relief is conducted by Disaster Response Forces.
(B) SAR happens after relief operations are complete.
(C) SAR focuses on locating and extricating survivors, while Relief focuses on providing sustenance to the affected population.
(D) There is no difference; the terms are interchangeable.

164. In the context of disaster communication, what does a "receiver-oriented view" emphasize?
(A) The power of the sender to inject ideas into the audience.
(B) The technical quality of the transmission channel.
(C) The speed at which the message is sent.
(D) The importance of the audience's interpretation, context, and feedback.

165. Given the typical sequence of actions for a first responder arriving at a scene with multiple victims:
I. Perform triage to prioritize patients.
II. Call for additional help and resources.
III. Ensure the scene is safe for responders and victims.
IV. Begin providing life-saving interventions to the most critical patients.
What is the correct sequence of these actions?
(A) III, II, I, IV
(B) II, III, IV, I
(C) I, III, II, IV
(D) IV, I, II, III

166. A journalist decides not to show graphic images of deceased victims out of respect for the families. This is an example of applying:
(A) Newsworthiness criteria
(B) Ethical principles in disaster communication
(C) A checklist for disaster reporting
(D) Social media tools

167. Which of the following is NOT a primary purpose of developing a hospital emergency disaster management plan?
(A) To ensure the safety of patients, staff, and visitors.
(B) To ensure the continuity of care for the community.
(C) To manage the allocation of scarce resources effectively.
(D) To increase the hospital's profits during the disaster period.

NODIA

168. The concept of "hazard adjustment" in risk communication research refers to:
(A) The actions people take to protect themselves and their property from a hazard.
(B) The scientific process of measuring the intensity of a hazard.
(C) The media's adjustment of a story to make it more newsworthy.
(D) The government's adjustment of casualty figures.

169. What type of assistance would be most appropriate for "self-sheltering populations" who are staying with host families?
(A) Forcing the host families to accept more people.
(B) Ignoring them as they are not in an official camp.
(C) Providing support to the host families (e.g., food vouchers, water purification tablets) to reduce the burden on them.
(D) Building a large, permanent shelter right next to the host family's house.

170. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : The Incident Response System (IRS) is a flexible, scalable system suitable for both small and large incidents.
Statement II : The IRS requires a full activation of all its sections (Operations, Planning, Logistics, Documentation) for every single incident, regardless of size.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is

Direction : Please read the following source carefully.

Effective emergency response is predicated on a structured and systematic approach, designed to mitigate chaos and maximize efficiency in the face of a disaster. Central to this structure is the Standard Operation Procedure (SOP), which provides pre-defined guidelines for various response actions, ensuring a consistent and coordinated effort among different agencies. Information management is the lifeblood of this process, facilitated by a robust Information Management System that handles the collection, analysis, and dissemination of critical data. A key function of this system is the timely dissemination of warnings to at-risk populations. The command and control aspect of the response is typically managed from an Emergency Operation Center (EOC), a centralized facility where decision-makers gather to direct and coordinate operations. To manage the on-ground activities, the Incident Response System (IRS) offers a standardized, all-hazards incident management concept. An overview of its features reveals a modular organization, unified command structure, and manageable span of control, which are implemented by dedicated Incident Response Teams. This integrated framework, from SOPs and warning systems to the EOC and IRS, forms the backbone of modern disaster response, enabling a scalable and organized reaction to emergencies of any magnitude.

Based on the above source, attempt the following five questions.

251. Which of the following best describes the primary function of a Standard Operation Procedure (SOP) in disaster response?
(A) To centralize all decision-making within the Emergency Operation Center.
(B) To provide pre-defined guidelines for consistent and coordinated actions.
(C) To manage the collection and analysis of data through an information system.
(D) To establish a modular organizational structure for on-ground activities.

252. According to the source, the Incident Response System (IRS) is characterized by which of the following features?
(A) A modular organization, unified command, and manageable span of control.
(B) A centralized data collection method and a focus on long-term recovery.
(C) A primary emphasis on warning dissemination and information analysis.
(D) A rigid structure exclusively managed by a single lead agency.

253. Based on the paragraph, what is the relationship between the Emergency Operation Center (EOC) and the overall disaster response?
(A) It is an on-ground team that directly implements search and rescue operations.
(B) It is a software system used for disseminating warnings to the public.
(C) It is a centralized facility for directing and coordinating response operations.
(D) It is a set of pre-defined rules that replace the need for an Incident Response System.

254. The passage suggests that a robust Information Management System is crucial for emergency response primarily because it:
(A) replaces the need for an Emergency Operation Center.
(B) ensures the physical safety of Incident Response Teams.
(C) provides the physical infrastructure for the Incident Response System.
(D) facilitates the flow of critical data for decision-making and warnings.

255. Which concept from the passage provides a standardized, all-hazards management framework for on-ground activities during an emergency?
(A) The Information Management System.
(B) The Standard Operation Procedure (SOP).
(C) The Incident Response System (IRS).
(D) The Emergency Operation Center (EOC).

Direction : Please read the following source carefully.

The effectiveness of an emergency response mechanism hinges on the strategic management of resources and the coordinated action of diverse actors. First responders, typically local emergency personnel, are the initial line of defense, providing immediate assistance at the disaster site. Their efforts are often supplemented by specialized Disaster Response Forces, which bring advanced

Downloaded from www.pdf.tube

numbers.
(B) Publishing contact information for relief agencies.
(C) The "miracle" narrative, focusing on a single survival story while ignoring widespread devastation.
(D) Explaining the geological cause of an earthquake.

180. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The role of communication in disaster management is solely to issue top-down commands.
Reason (R) : A receiver-oriented view of communication, which values feedback and dialogue, is crucial for building trust and ensuring cooperation from the affected public.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

181. Consider the following factors for site selection of an emergency settlement:
I. Flat, well-drained ground, not prone to flooding.
II. Reasonable proximity to a safe water source.
III. Safe distance from ongoing hazards or threats.
IV. Availability of a five-star hotel nearby.
V. Good road access for delivery of relief supplies.
Which of the above are valid criteria?
(A) IV only
(B) I, II, and III only
(C) I, II, III, and V only
(D) I and IV only

182. Who among the following is typically considered a 'first responder'?
(A) A university researcher studying the disaster's long-term effects.
(B) A paramedic arriving at the scene of an accident.
(C) A government official drafting a new policy a year after the event.
(D) An international diplomat negotiating aid treaties.

183. The effectiveness of disaster warnings as risk communication depends heavily on:
(A) The loudness of the siren.
(B) The number of times the message is repeated in a single minute.
(C) The cost of the advertisement slot on television.
(D) The clarity, consistency, and credibility of the message and its source.

184. Emergency medical preparedness for a hospital includes:
(A) Developing a robust plan for handling mass casualties.
(B) Planning for an increase in routine, non-urgent appointments.
(C) Reducing the stockpile of medical supplies to save space.
(D) Training doctors only, with no focus on nurses or support staff.

NODIA

185. The difference between the role of a Disaster Response Force and a Community Based Organization (CBO) is that:
(A) CBOs have heavy machinery, while DRFs rely on local knowledge.
(B) DRFs are responsible for long-term reconstruction, while CBOs handle immediate response.
(C) The DRF is a professional, often governmental body with specialized skills, while a CBO is a local, grassroots group.
(D) There is no difference in their roles and capabilities.

186. The concept of 'newsworthiness' in disaster reporting means that an earthquake in a remote area might get less coverage than one in a major city. This is due to the criterion of:
(A) Impact and Proximity
(B) Timeliness
(C) Novelty
(D) Prominence

187. Which of the following is NOT a reason for the importance of proper handling and identification of human remains?
(A) For the legal rights of inheritance for the

(C) Policy Formulation
(D) Response

229. A key aspect of "Wound Management" in First Aid is:
(A) Applying mud to the wound.
(B) Applying chemical disinfectants directly to an open wound.
(C) Cleaning the wound and covering it with a sterile dressing.
(D) Stitching the wound using a regular needle and thread.

230. The "Black" or "Expectant" category in First Aid Triage is for patients who:
(A) Have minor injuries.
(B) Are deceased or have injuries so severe that survival is unlikely.
(C) Require immediate surgery to live.
(D) Are emotionally distressed but physically unharmed.

231. The "scope of communication" in disaster management covers:
(A) Only the warning phase.
(B) Only communication between government agencies.
(C) Only media-related activities.
(D) All communication activities across all phases (mitigation, preparedness, response, recovery).

232. An example of a "receiver oriented view" in disaster communication is:
(A) Holding community meetings to understand local concerns and tailor information.
(B) A government agency sending out a press release without checking if anyone reads it.
(C) Broadcasting a technical message that few people can understand.
(D) A one-way siren alert system.

233. The 'Newsworthiness' of a disaster story for media often depends on factors like timeliness, proximity, and:
(A) The personal feelings of the news editor.
(B) The cost of the advertising space next to the story.
(C) The human interest element or impact.
(D) The political party in power.

234. A key 'checklist' item for a journalist engaging in disaster reporting should be:
(A) How to verify information from multiple sources before reporting.
(B) How to get the most sensational photo.
(C) How to demand special treatment from first responders.
(D) How to find the best restaurant in the disaster zone.

235. The main purpose of "vector and pest control" in an emergency settlement is to prevent:
(A) The camp from looking untidy.
(B) Residents from keeping pets.
(C) The growth of trees and shrubs.
(D) The spread of diseases.

236. The primary role of an Emergency Support Function (ESF) is:
(A) To provide financial support to disaster victims.
(B) To provide a mechanism for coordinating a specific category of assistance.
(C) To act as a political body.
(D) To create new laws.

237. The 'T' in the START triage system stands for:
(A) Temperature
(B) Triage
(C) Treatment
(D) Time

238. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : Community Based Organizations (CBOs) are often the first to respond to a disaster in their area.
Statement II : CBOs are ineffective in disaster response because they lack local knowledge.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both statements are correct.
(D) Both statements are incorrect.

239. The most significant challenge in Mass Casualty Management is:
(A) The mismatch between the needs of the casualties and the available resources.

Click Here to Buy book on Amazon

196. An Incident Response Team is a specific group of people that:
(A) Assemble spontaneously at a disaster site with no prior training.
(B) Are responsible for post-disaster auditing.
(C) Work exclusively on creating disaster-related documentaries.
(D) Are pre-identified, trained, and equipped to manage an incident.

197. The term 'newsworthiness' is central to which topic?
(A) Emergency Health Services
(B) Shelter and Emergency Settlements
(C) Media and Public Affairs
(D) Emergency Support Functions

198. Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer from the options given below.
Assertion (A) : The primary goal of First Aid Triage is to ensure that every injured person receives immediate and complete medical treatment on the spot.
Reason (R) : Triage is a process of sorting and prioritizing patients to optimize the use of limited resources and save the maximum number of lives.
(A) Both A and R are true and R is the correct explanation of A.
(B) Both A and R are true but R is not the correct explanation of A.
(C) A is true but R is false.
(D) A is false but R is true.

199. One of the greatest challenges of using 'short-term shelter in existing buildings' like schools is:
(A) The buildings are usually too comfortable.
(B) The buildings are always located in safe, undamaged areas.
(C) There is never a need to use such buildings.
(D) The need to relocate the displaced population quickly so the building can return to its original function.

200. What is a defining characteristic of a Community Based Organization (CBO)?
(A) It is composed of members from the community it serves and addresses local issues.
(B) It is headquartered in a foreign country.
(C) It is a branch of the national military.
(D) It has a mandate to operate globally.

201. What does the term "Warning Dissemination" mean?
(A) The scientific study of how warnings are created.
(B) The legal document that authorizes a warning.
(C) The process of spreading a warning message to the people who are at risk.
(D) The analysis of a warning's effectiveness after an event.

202. The first step in Basic Life Support (BLS) after ensuring the scene is safe is to:
(A) Check for the victim's responsiveness.
(B) Immediately start chest compressions.
(C) Call for an ambulance.
(D) Administer medication.

NODIA

203. Which of the following is NOT a tool for social media that can be used in a crisis?
(A) Twitter for real-time updates.
(B) Facebook for safety check-ins and community groups.
(C) Ushahidi for crowdsourced crisis mapping.
(D) A traditional, non-digital, hand-cranked radio.

204. "Risk Perception" is a central concept in Risk Communication because:
(A) It is an objective, scientific measure of a hazard.
(B) It determines how individuals personally interpret and react to a threat.
(C) It is identical to Hazard Awareness.
(D) It is a theory that only applies to communication experts.

205. The main objective of relief operations is to:
(A) Reconstruct all damaged buildings.
(B) Conducting a census of the affected population.
(C) Provide immediate, life-sustaining assistance to disaster victims.
(D) Interview survivors for a documentary.

206. A key feature of an Emergency Operation Center (EOC) is:

correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

171. The main function of an Emergency Support Function (ESF) for "Public Works and Engineering" would likely be:
(A) Providing psychological first aid.
(B) Conducting mass vaccination campaigns.
(C) Managing media relations and press conferences.
(D) Clearing debris, restoring public services like water, and inspecting infrastructure.

172. The "Socio-cultural" tradition of communication is relevant to disaster management as it helps understand:
(A) How communication technologies process information.
(B) How disasters and response efforts are constructed and understood through social interaction and cultural norms.
(C) How to make a persuasive speech.
(D) How to critique power structures in aid distribution.

173. Which of the following describes a key element of Mass Casualty Management?
(A) Providing one-on-one, long-term therapy to each victim on site.
(B) Ensuring all patients are sent to the same, single hospital.
(C) Implementing a triage system to prioritize care.
(D) Waiting for all specialized surgeons to arrive before starting any treatment.

174. A primary ethical issue in disaster communication for media is the conflict between:
(A) Reporting in black-and-white versus color.
(B) Using Twitter versus Facebook.
(C) The journalist's salary and the company's profit margin.
(D) The public's right to know and the individual victim's right to privacy.

175. What is the primary reason for having a Standard Operation Procedure (SOP) for disaster response?
(A) To ensure a coordinated, predictable, and efficient response.
(B) To increase the complexity and paperwork of response efforts.
(C) To limit the autonomy of first responders.
(D) To provide a script for media interviews.

176. Which of the following is NOT a focus of prehospital care?
(A) Basic Life Support (BLS)
(B) Long-term rehabilitation and physical therapy
(C) Wound management
(D) Proper handling and transport of injured persons

177. Match the items in List I with those in List II and select the correct option.
List I: (Social Media Crisis Use)
P. Situational Awareness
Q. Rumor Management
R. Emotional Support
S. Resource Mobilization
List II: (Example)
1. Creating a crowdfunding page for a family that lost their home.
2. Sharing a verified "fact-check" post from an official emergency agency.
3. Using hashtags to aggregate photos and reports from an affected area.
4. Community members sharing messages of hope and solidarity.
(A) P-1, Q-3, S-2, R-4
(B) P-3, Q-2, S-1, R-4
(C) P-3, Q-4, S-1, R-2
(D) P-4, Q-1, S-2, R-3

178. The identification and handling of human remains is a multi-agency task that often falls under which specialized field?
(A) Disaster Victim Identification (DVI)
(B) Public Relations
(C) Information Technology
(D) Logistics and Supply Chain Management

179. A common 'bias or stereotype' in disaster reporting is:
(A) Providing accurate and verified casualty

Downloaded from www.pdf.tube

216. Mass Casualty Management plans are activated when:
(A) The number of patients and the severity of their injuries overwhelm the normal capacity of a facility.
(B) There one seriously injured person.
(C) A VIP is admitted to the hospital.
(D) The hospital receives a large donation.

217. Hospital Safety and Preparedness is a concept that includes:
(A) Only the physical strength of the building.
(B) The quality of the food served in the cafeteria.
(C) Both structural integrity and functional plans for disaster response.
(D) The number of parking spaces available.

218. The "nature and scope of communication" in disaster management is best described as:
(A) A complex and multi-faceted process involving many actors and phases.
(B) A simple, one-step process.
(C) A task only for the media.
(D) Irrelevant to the success of the response.

219. The "Sender and Receiver Oriented Views" of communication differ primarily on the importance they place on:
(A) The cost of the message.
(B) The speed of delivery.
(C) The technology used.
(D) The role of feedback and shared understanding.

220. The "Cultural Cognition Theory of Risk" helps explain why:
(A) All people react to scientific facts in the same way.
(B) Different social groups might perceive the same risk differently.
(C) Culture is irrelevant to risk perception.
(D) Risk is purely an objective calculation.

221. Which of the following is an objective of mass media in a disaster?
(A) To create widespread panic.
(B) To focus exclusively on government failures.
(C) To provide a channel for public information and warnings.
(D) To suspend all broadcasting.

222. An ethical issue in disaster communication by media is:
(A) Using clear and simple language.
(B) Verifying information before broadcasting.
(C) Providing contact numbers for aid agencies.
(D) The potential for exploiting victims' grief for sensational content.

223. What is a key challenge in reporting on disasters?
(A) Balancing speed of reporting with the need for accuracy.
(B) Disasters are never newsworthy.
(C) There is too much verified information available.
(D) Journalists are never in any danger.

NODIA

224. Which of the following describes "intermediate shelter"?
(A) The family's own car used for sleeping.
(B) A more durable, transitional shelter that can last for months or a few years.
(C) A tent provided for the first few nights.
(D) A newly constructed permanent house.

225. What is the primary purpose of an Emergency Support Function (ESF)?
(A) To function as a legal body to prosecute criminals during a disaster.
(B) To provide a framework for coordinating support for a specific functional area.
(C) To be the sole provider of all disaster relief.
(D) To create jobs for unemployed citizens.

226. Which of the following is NOT a component of the Incident Response System (IRS)?
(A) Media Promotion
(B) Command
(C) Operations
(D) Planning

227. A key element of the India Disaster Resource Network (IDRN) is that it is a:
(A) Physical library of books.
(B) Radio broadcast station.
(C) Web-based inventory of resources.
(D) A team of first responders.

228. The role of Disaster Response Forces primarily falls under which phase of disaster management?
(A) Mitigation
(B) Long-term Recovery

(A) It must be located underground.
(B) It is open to the public for shelter.
(C) It is primarily a media broadcasting studio.
(D) It brings together decision-makers from various agencies to facilitate coordination.

207. Which statement accurately describes the Incident Response System (IRS)?
(A) It is a standardized, all-hazards incident management concept.
(B) It is a rigid military command structure.
(C) It is a software program for managing resources.
(D) It is a system used only for international aid.

208. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : The primary focus of media and public affairs during a disaster is to control all information and prevent journalists from reporting.
Statement II : A key role of media and public affairs is to facilitate the flow of accurate and timely information to the public through the media.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

209. In the context of emergency settlements, site selection must prioritize:
(A) A scenic view for the residents.
(B) The safety of the population from environmental hazards and health risks.
(C) Proximity to the city center for entertainment.
(D) A location that is difficult for aid agencies to access.

210. What is the role of First Responders?
(A) To be the first on the scene to provide immediate assistance.
(B) To develop long-term recovery plans.
(C) To manage the budget for the disaster response.
(D) To write the final incident report.

211. Which of the following best defines "Health in Emergencies"?
(A) The exclusive study of new viruses.
(B) The financial health of a hospital during a crisis.
(C) The field of public health that deals with the health consequences of disasters.
(D) A fitness program for emergency responders.

212. A key component of planning for Emergency Health Services is ensuring "continuity". This means:
(A) All doctors must work continuously without breaks.
(B) The emergency lasts for a continuous period.
(C) Patients see the same nurse every day.
(D) Plans are in place to maintain essential health functions despite the crisis.

213. Prehospital care, such as applying a splint to a fracture, is done to:
(A) Fully heal the fracture before reaching the hospital.
(B) Allow the patient to walk on the fractured limb.
(C) Prevent further injury and reduce pain during transport.
(D) Create a more dramatic injury for news cameras.

214. Which principle is fundamental to First Aid Triage?
(A) First-come, first-served.
(B) Prioritizing care based on the severity of injury and likelihood of survival.
(C) Treating women and children first.
(D) Treating the quietest patients last.

215. What is the core function of a Public Health Emergency Operations Centre (PHEOC)?
(A) To serve as the central point of coordination for a public health response.
(B) To act as a primary care clinic for the general public.
(C) To manufacture pharmaceuticals.
(D) To train journalists on how to report on health issues.

Click Here to Buy book on Amazon

(B) An abundance of resources.
(C) Having too few patients.
(D) Patients who are not seriously injured.

240. The Cultural Cognition Theory of Risk suggests that risk communication should:
(A) Ignore cultural differences.
(B) Frame information in a way that aligns with the values of the target group.
(C) Use a one-size-fits-all approach.
(D) Only use scientific jargon.

241. "Media relations" during an emergency is the process by which response organizations:
(A) Avoid journalists at all costs.
(B) Systematically manage communication and interaction with the media.
(C) Sell exclusive stories to the highest bidder.
(D) Censor all news reports.

242. "Short-term shelter in existing buildings" is a strategy that:
(A) Utilizes community structures like schools and halls for temporary housing.
(B) Involves building new houses.
(C) Provides cash grants for rent.
(D) Is a permanent solution.

243. The Information Management System in an EOC is designed to counter what common problem in a disaster?
(A) A lack of any information.
(B) A lack of food for the staff.
(C) The confusion caused by incomplete, contradictory, or overwhelming information.
(D) The absence of media coverage.

244. In Basic Life Support (BLS), after confirming unresponsiveness and absence of normal breathing, what is the next immediate step for a single rescuer?
(A) Go find water for the victim.
(B) Start chest compressions.
(C) Check for a wallet and identification.
(D) Call for emergency help.

245. Which of the following is NOT a primary role of a First Responder?
(A) Initial assessment of the scene.
(B) Providing immediate life-saving care.
(C) Conducting long-term structural repairs to buildings.
(D) Requesting additional resources.

246. What is the main principle behind the Incident Response System's feature of 'Unity of Command'?
(A) All agencies must merge into a single new organization.
(B) Every individual reports to a single designated supervisor.
(C) There is only one commander for all disasters in the country.
(D) Everyone can give orders to everyone else.

247. The most critical factor in the site selection for an emergency settlement is:
(A) Proximity to a shopping mall.
(B) The political affiliation of the landowner.
(C) The availability of high-speed internet.
(D) Access to safe water and sanitation.

248. The primary purpose of a "Hospital emergency disaster management plan" is to:
(A) Prepare the hospital to effectively respond to and manage the consequences of a disaster.
(B) Increase the hospital's patient capacity for profit.
(C) Detail the vacation schedule for all doctors.
(D) Outline a plan for closing the hospital permanently.

249. A major 'ethical issue' in disaster reporting involves the balance between the public's need for information and:
(A) The reporter's need to win an award.
(B) The media company's stock price.
(C) The protection of victims' privacy and dignity.
(D) The government's preference for secrecy.

250. An Emergency Support Function (ESF) for "Mass Care, Emergency Assistance, Housing, and Human Services" would be primarily responsible for:
(A) Coordinating the provision of shelter, food, water, and other essential services to victims.
(B) Repairing power lines.
(C) Conducting search and rescue operations.
(D) Managing public health surveillance.

Downloaded from www.pdf.tube

survivors.
(B) To provide certainty and psychological closure for families.
(C) For accurate statistical accounting of the disaster's toll.
(D) To quickly bury or cremate them to prevent a supposed 'miasma' or airborne plague.

188. In the START triage method, what is the first thing you assess?
(A) Ability to obey commands
(B) Ability to walk
(C) Capillary refill time
(D) Presence of breathing

189. Given below are two statements. Read the statements and select the correct answer from the options given below.
Statement I : Effective Media Relations during a crisis involves holding regular, timely press briefings with verified information.
Statement II : The goal of media relations is to create an information vacuum to prevent the spread of rumors.
(A) Statement I is correct but Statement II is incorrect.
(B) Statement I is incorrect but Statement II is correct.
(C) Both Statement I and Statement II are correct.
(D) Both Statement I and Statement II are incorrect.

190. What is a key 'longer-term issue' for emergency settlements?
(A) The immediate distribution of water bottles.
(B) The initial first aid response.
(C) The color of the tents.
(D) Environmental impact and site rehabilitation after the camp is decommissioned.

191. The Emergency Support Function (ESF) related to communications would be responsible for:
(A) Restoring and maintaining communication links for responders and the public.
(B) Writing newspaper articles about the disaster.
(C) Providing translation services for international tourists.
(D) Repairing damaged roads and bridges.

192. What is the primary role of an Information Management System in disaster response?
(A) To replace human decision-making with artificial intelligence.
(B) To provide a structured way to collect, process, analyze, and share information.
(C) To manage the financial accounts of the responding agencies.
(D) To create a social network for the disaster victims.

193. Which of the following is an example of 'vector and pest control' in an emergency settlement?
(A) Distributing musical instruments.
(B) Draining stagnant water and managing solid waste.
(C) Setting up a camp library.
(D) Organizing a camp-wide sports day.

194. The 'Rhetorical' tradition of communication, as applied to disaster management, would focus on:
(A) The use of persuasive language and public speaking by leaders to encourage evacuation.
(B) The flow of data within the EOC's computer network.
(C) The power dynamics between aid agencies and beneficiaries.
(D) The shared understanding of symbols within a culture.

NODIA

195. Consider the following functions within a Public Health Emergency Operations Centre (PHEOC):
I. Surveillance and data analysis of disease trends.
II. Coordination of public health resources (e.g., vaccines, medical teams).
III. Risk communication and public information.
IV. Performing all surgeries for the entire affected region.
Which of the above are key functions of a PHEOC?
(A) IV only
(B) I and II only
(C) I, II, and III only
(D) I, II, III and IV

capabilities for complex operations like search and rescue. A critical, yet sometimes overlooked, component of this mechanism is the role of Community Based Organizations (CBOs). These organizations are instrumental in reaching vulnerable populations, providing localized relief, and acting as a bridge between the affected community and formal response agencies. To ensure that all these actors have the necessary equipment and supplies, effective resource management is paramount. A key tool in this domain is the India Disaster Resource Network (IDRN), a web-based platform designed to create a systematic inventory of resources available across the country. This network facilitates quick and efficient access to essential assets, from heavy machinery to medical supplies, by connecting resource owners with disaster managers. The synergy between trained forces, community involvement through CBOs, and a networked resource management system like IDRN is fundamental to a comprehensive and successful emergency response.

Based on the above source, attempt the following five questions.

256. What is the principal role of the India Disaster Resource Network (IDRN) as described in the paragraph?
(A) To directly deploy Disaster Response Forces to an incident site.
(B) To act as a web-based inventory for locating and mobilizing resources.
(C) To train first responders in basic search and rescue techniques.
(D) To coordinate the activities of Community Based Organizations (CBOs).

257. The passage distinguishes between "First Responders" and "Disaster Response Forces" by implying that:
(A) First Responders are voluntary, whereas Disaster Response Forces are government-employed.
(B) Disaster Response Forces manage the IDRN, while First Responders use the resources.
(C) First Responders are only involved in relief operations, not search and rescue.
(D) First Responders provide initial local assistance, while Disaster Response Forces offer specialized capabilities.

258. According to the source, what is the instrumental role of Community Based Organizations (CBOs) in the emergency response mechanism?
(A) They connect formal agencies with affected communities and provide localized relief.
(B) They are primarily responsible for managing the Emergency Operation Center.
(C) They focus exclusively on mobilizing resources through the IDRN.
(D) They command the specialized Disaster Response Forces during operations.

259. Based on the information provided, what is the main objective of resource management in an emergency context?
(A) To create a hierarchical command structure for all response personnel.
(B) To limit the involvement of Community Based Organizations in relief efforts.
(C) To ensure that response actors have timely access to necessary equipment and supplies.
(D) To document the history of past disasters for future planning.

260. The passage suggests that a comprehensive emergency response is achieved through:
(A) the synergy between professional forces, community actors, and resource networks.
(B) the exclusive reliance on advanced Disaster Response Forces.
(C) the complete automation of resource allocation via the India Disaster Resource Network.
(D) the delegation of all response activities to Community Based Organizations.

Direction : Please read the following source carefully.

Emergency Health Services form a critical pillar of disaster management, focusing on minimizing mortality and morbidity in the immediate aftermath of a crisis. The overarching domain of "Health in Emergencies" necessitates meticulous planning to ensure the continuity and accessibility of health services, even when infrastructure is compromised. A significant component of this is prehospital care, which encompasses all medical interventions before a patient reaches a formal healthcare facility. First Aid constitutes the most fundamental level of prehospital care, involving immediate assistance for injuries and sudden

Click Here to Buy book on Amazon

(C) The availability of luxury amenities for residents.
(D) The site's safety from hazards and access to water.

294. The planned arrangement of emergency settlements is important primarily to:
(A) maximize the number of people that can be housed in the smallest area.
(B) mitigate health and social risks by ensuring adequate space and sanitation.
(C) create a visually appealing layout for media photography.
(D) facilitate the rapid conversion of the settlement into a permanent city.

295. The use of schools or community halls for shelter is presented as an option for:
(A) long-term, permanent housing solutions.
(B) housing for disaster response workers only.
(C) rapid, short-term shelter, particularly in urban disasters.
(D) creating more durable intermediate shelters.

Direction : Please read the following source carefully.

The management of emergency settlements extends beyond initial site selection and construction, encompassing longer-term issues that are critical for the health and well-being of the displaced population. As settlements become established, even temporarily, they face challenges common to any dense population center. A primary concern among these longer-term issues is public health, with vector and pest control being a crucial activity. Inadequate sanitation and waste management can lead to the proliferation of disease-carrying vectors like mosquitoes and rodents, necessitating systematic control measures to prevent outbreaks of diseases such as malaria, dengue, or cholera. Beyond the immediate needs of a single settlement, a comprehensive national disaster response requires a structured coordination mechanism. This is often achieved through the framework of Emergency Support Functions (ESFs). ESFs provide a structure for grouping capabilities and resources into functional areas, such as transportation, public works, health and medical services, and mass care. Each ESF has a designated lead agency responsible for coordinating the efforts of multiple governmental and non-governmental partners within that functional area. This system ensures that the complex, multi-faceted demands of a large-scale disaster response are managed in an organized and integrated manner, addressing everything from infrastructure repair to long-term shelter and public health.

Based on the above source, attempt the following five questions.

NODIA

296. According to the paragraph, why is vector and pest control considered a critical longer-term issue in emergency settlements?
(A) To improve the aesthetic appearance of the settlement.
(B) To provide employment opportunities for the displaced population.
(C) To test the effectiveness of new pesticides for commercial use.
(D) To prevent the outbreak of diseases carried by mosquitoes and rodents.

297. What is the primary purpose of the Emergency Support Functions (ESF) framework?
(A) To structure and coordinate national response capabilities into functional areas.
(B) To provide direct financial aid to individual disaster victims.
(C) To train community members in first aid and pest control.
(D) To select the initial sites for the construction of emergency shelters.

298. The passage implies that issues like vector control become more pressing in the "longer-term" because:
(A) initial emergency shelters are designed to be vector-proof.
(B) inadequate sanitation and waste management problems can develop over time in dense settlements.
(C) international aid for such activities only arrives after several weeks.
(D) pests and vectors are not present in the immediate aftermath of a disaster.

299. Based on the description of Emergency Support Functions (ESFs), which of the following would likely be an example of an ESF?
(A) A specific emergency shelter site.
(B) The functional area of "Transportation,"

make strategic decisions. Individual healthcare facilities must also be prepared; a comprehensive Hospital Emergency Disaster Management Plan is essential for any hospital. This plan outlines procedures for managing patient surge, augmenting staff, and ensuring the facility's own safety and operational continuity. Integral to this is the concept of Hospital Safety and Preparedness, which includes structural and non-structural measures to ensure the hospital can withstand the disaster and continue to function.

Based on the above source, attempt the following five questions.

266. What is the fundamental principle of First Aid Triage in Mass Casualty Management?
(A) To treat patients on a first-come, first-served basis.
(B) To sort patients to achieve the greatest good for the largest number of people.
(C) To provide the most advanced care to the most critically injured, regardless of resources.
(D) To ensure every injured person receives immediate and equal medical attention.

267. According to the passage, the primary function of a Public Health Emergency Operations Centre (PHEOC) is to:
(A) provide direct prehospital care and first aid to victims at the disaster site.
(B) serve as a centralized command structure for coordinating the public health response.
(C) develop the specific emergency disaster management plan for a single hospital.
(D) conduct structural safety assessments of all public buildings after a disaster.

268. A Hospital Emergency Disaster Management Plan is described as essential for:
(A) enabling a hospital to manage patient surge and maintain its own operational continuity.
(B) directing the actions of all first responders in the field.
(C) prioritizing which hospitals in a region will receive government funding.
(D) establishing the triage system to be used by all public health agencies.

269. The concept of "Hospital Safety and Preparedness" as mentioned in the text includes:
(A) only the training of medical staff in emergency procedures.
(B) the system for communicating with the media during a mass casualty incident.
(C) measures to ensure the hospital building itself can withstand a disaster and remain functional.
(D) the financial plan for hospital recovery after an emergency.

270. The passage suggests that Mass Casualty Management strategies are necessary when:
(A) any disaster involving more than ten injured individuals occurs.
(B) a Public Health Emergency Operations Centre is not activated.
(C) a hospital's emergency plan has not been recently updated.
(D) the number of patients overwhelms the available medical resources.

Direction : Please read the following source carefully.

Risk communication is a complex and vital discipline within disaster management, extending beyond the mere transmission of information. Its role is to facilitate an informed dialogue about hazards and protective measures between experts and the public. The nature and scope of this communication are multifaceted, involving psychological, social, and cultural dimensions. Traditional models and processes of communication can be applied to disaster management, but they must be critically evaluated. A distinction is often made between sender-oriented views, which focus on crafting and delivering a perfect message, and receiver-oriented views, which prioritize how the audience perceives, interprets, and uses the information. For a more comprehensive understanding, the seven traditions of communication—rhetorical, semiotic, phenomenological, cybernetic, socio-psychological, socio-cultural, and critical—offer distinct perspectives. For instance, the cybernetic tradition views disaster communication as a system of information processing, while the socio-cultural tradition emphasizes how reality is co-created through interaction. A normative perspective on disaster communication suggests an ethical framework, advocating for communication that is truthful, transparent, and empowering

Downloaded from www.pdf.tube

ANSWERS

1. (B) Standard Operating Procedures
Standard Operating Procedures are established protocols used to ensure consistency, safety, and efficiency in complex environments like disaster response. By providing a clear framework for actions, they reduce decision-making time during crises and facilitate coordination between different agencies. These documents outline specific responsibilities and steps for various scenarios, ensuring that all responders follow a uniform and tested approach to emergency management.

2. (A) To provide immediate assistance and initial care to victims.
First responders are the individuals who arrive earliest at the scene of an emergency to provide vital immediate assistance. Their primary role involves stabilizing the situation, offering life-saving initial care, and managing immediate hazards to protect victims and bystanders. They bridge the critical gap between the occurrence of an event and the arrival of specialized medical services, focusing on preserving life and preventing harm.

3. (A) P-3, Q-4, S-2, R-1
Triage is a clinical process used to prioritize patients based on the severity of their condition when resources are limited. The color-coding system helps responders quickly identify treatment urgency. Red signifies immediate life-threatening injuries requiring instant intervention. Yellow denotes serious but non-life-threatening conditions. Green represents minor injuries where victims can walk, while black identifies those who are deceased or beyond medical help during the incident.

4. (D) An EOC is typically located in the field, directly at the disaster site.
Emergency Operation Centers serve as centralized hubs for strategic management and inter-agency coordination during large-scale incidents. Unlike field command posts, which are positioned at the disaster site for tactical control, these centers are usually located in secure, off-site facilities. This separation ensures that strategic decision-makers can operate in a stable environment, focusing on resource allocation, information management, and maintaining continuity of essential operations.

5. (C) To maintain vital life functions until advanced medical help arrives.
Basic Life Support involves non-invasive emergency procedures used to assist victims whose breathing or heartbeat has stopped. The primary goal is to sustain blood circulation and oxygenation to the brain and other vital organs using techniques like cardiopulmonary resuscitation. By stabilizing the patient, these interventions buy critical time, preventing irreversible tissue damage until professional paramedics or hospital teams can provide advanced medical treatment and stabilization.

6. (A) Both A and R are true and R is the correct explanation of A.
Risk communication is a vital proactive strategy used during the pre-disaster phase to mitigate potential impacts. By providing clear, science-based information about hazards, authorities can significantly increase public awareness and understanding of specific threats. This awareness is the foundation for encouraging individuals to adopt protective behaviors, such as creating emergency kits or following evacuation plans, which ultimately reduces vulnerability and enhances community resilience.

7. (D) To generate revenue through sensationalized reporting of victim stories.
Mass media plays a crucial humanitarian role during crises by disseminating life-saving information and holding authorities accountable for their response actions. Ethical journalism focuses on informing the public, facilitating relief efforts, and providing a voice to affected populations. Sensationalizing suffering for financial gain is considered a major ethical violation. Instead, responsible media outlets prioritize accuracy and public service to support effective emergency management efforts.

NODIA

276. According to the paragraph, what is "risk perception"?
(A) The subjective judgment an individual makes about the severity of a risk.
(B) An official assessment of a hazard's physical characteristics.
(C) The objective probability of a disaster occurring in a specific area.
(D) A government-issued warning about an impending natural disaster.

277. The Cultural Cognition Theory of Risk suggests that an individual's perception of risk is primarily shaped by:
(A) their level of scientific education and literacy.
(B) the clarity and volume of the official warning message.
(C) their direct personal experience with past disasters.
(D) the values and beliefs held by their social group.

278. The passage argues that the success of a disaster warning depends most heavily on:
(A) the technological medium used for its dissemination.
(B) the audience's perception and interpretation of the risk.
(C) the legal authority of the agency issuing the warning.
(D) the amount of scientific data included in the message.

279. Which of the following best explains why different groups might react differently to the same disaster warning, according to the source?
(A) Some groups receive the warning later than others due to technical failures.
(B) Certain populations are inherently more prone to panic than others.
(C) Cultural influences and group values shape how the risk information is interpreted.
(D) The warning messages are intentionally written in different languages.

280. The paragraph implies that relying solely on scientific evidence in risk communication may be insufficient because:
(A) scientific evidence is often inaccurate and unreliable.
(B) the public generally distrusts scientists and official experts.
(C) disseminating complex data can be prohibitively expensive for authorities.
(D) cultural cognition and pre-existing values can override factual information.

Direction : Please read the following source carefully.

The media and public affairs play a dual and often contentious role in disaster management and humanitarian crises. An overview of this relationship reveals the media as a powerful tool for disseminating critical information, promoting public awareness, and holding authorities accountable. The objectives of mass media in a disaster context ideally include providing timely warnings, offering practical advice, and facilitating fundraising and volunteer efforts. However, this role is fraught with ethical issues. Problems such as invasion of privacy, the graphic portrayal of suffering, and the potential to incite panic or spread misinformation are significant concerns. A critical understanding of news media coverage requires an awareness of inherent biases and stereotypes. Disasters affecting certain regions or demographic groups may receive disproportionate or sensationalized coverage, which can shape public perception and influence the allocation of aid. For example, portraying victims as helpless rather than resilient can undermine local coping capacities. Therefore, while the media is an indispensable partner in disaster communication, its operations must be viewed through a critical lens that acknowledges both its potential for good and its capacity to cause harm through unethical practices and biased reporting.

Based on the above source, attempt the following five questions.

281. Which of the following is presented in the paragraph as a primary objective of mass media during a disaster?
(A) To provide timely warnings and practical advice to the public.
(B) To generate profit through increased viewership and advertising.
(C) To focus exclusively on the failures of the responding agencies.
(D) To protect the privacy of officials managing

Click Here to Buy book on Amazon

illness. This includes specific interventions for different cases, such as controlling bleeding or stabilizing fractures. A more advanced level of prehospital care is Basic Life Support (BLS), a set of life-saving techniques used for victims of cardiac arrest, respiratory failure, or airway obstruction. Beyond these immediate interventions, proper wound management is essential to prevent infection and promote healing. Equally important is the correct handling of injured persons during transport and movement to avoid exacerbating their injuries. The proficiency of first responders and the general public in these prehospital care techniques can significantly influence patient outcomes, making public education and training vital components of emergency preparedness.

Based on the above source, attempt the following five questions.

261. What is the primary focus of "prehospital care" as described in the paragraph?
(A) Long-term rehabilitation of disaster victims in a hospital setting.
(B) The administrative planning of health service continuity during a disaster.
(C) The management of hospital emergency plans and patient intake.
(D) Medical interventions provided before a patient arrives at a healthcare facility.

262. The source distinguishes Basic Life Support (BLS) from general First Aid by highlighting that BLS:
(A) is only performed by professional medical personnel inside a hospital.
(B) is a set of life-saving techniques specifically for cardiac arrest and respiratory failure.
(C) primarily involves wound management and the handling of injured persons.
(D) can be applied in all cases of injury, regardless of severity.

263. According to the passage, why is the proper handling of injured persons considered a crucial aspect of emergency health services?
(A) To ensure that all patients are triaged correctly upon arrival.
(B) To facilitate easier documentation for hospital records.
(C) To avoid causing further harm or worsening existing injuries.
(D) To prioritize patients who require Basic Life Support.

264. The passage implies that planning for the continuity and access of Emergency Health Services is essential because:
(A) prehospital care is generally ineffective without it.
(B) it is a legal requirement for all Community Based Organizations.
(C) it reduces the need for First Aid and Basic Life Support.
(D) healthcare infrastructure is often compromised during disasters.

265. Which of the following statements can be inferred from the paragraph?
(A) The outcome for an injured person can be significantly affected by the initial care they receive on-site.
(B) Only trained paramedics should attempt to provide First Aid.
(C) Wound management is less important than Basic Life Support in all emergency situations.
(D) Once prehospital care is administered, the continuity of health services is no longer a concern.

Direction : Please read the following source carefully.

In large-scale emergencies, the capacity of healthcare systems can be rapidly overwhelmed, necessitating specialized management strategies. Mass Casualty Management is a systematic approach to handling a surge of patients that exceeds the available medical resources. A cornerstone of this approach is First Aid Triage, a process of sorting and prioritizing patients based on the urgency of their need for care. The core principles of triage aim to do the most good for the greatest number of people, which may involve difficult decisions about allocating limited resources. Various triage systems, each with specific categories and criteria, are used to streamline this process. To coordinate the broader public health response, a Public Health Emergency Operations Centre (PHEOC) may be activated. The PHEOC framework provides a centralized command and control structure for public health agencies to manage information, coordinate resources, and

NODIA

reconstruction stories.
(C) chaotic and characterized by a scarcity of confirmed information.
(D) managed exclusively by alternative media sources.

288. What is the stated purpose of a checklist for disaster reporting?
(A) To help journalists decide if a disaster is newsworthy.
(B) To ensure coverage includes crucial details like safety and relief information.
(C) To serve as a legal document protecting journalists from liability.
(D) To coordinate the release of information between different media outlets.

289. The source suggests that effective media relations during an emergency involve:
(A) response agencies avoiding all contact with the media to prevent misinformation.
(B) media outlets relying solely on social media for their news reports.
(C) journalists waiting for the recovery phase before publishing any stories.
(D) response agencies proactively engaging with the media to provide accurate information.

290. How has the role of social media changed crisis communication, according to the passage?
(A) It has introduced tools for real-time updates and direct public engagement.
(B) It has made traditional media outlets completely obsolete.
(C) It has eliminated the need for official sources and expert opinions.
(D) It has reduced the phases of disaster reporting to a single, continuous phase.

Direction : Please read the following source carefully.

Providing shelter for populations displaced by disasters is a fundamental component of humanitarian response, encompassing a range of solutions tailored to different needs and timelines. A significant portion of those affected are often self-sheltering populations, who find refuge with host families or in makeshift arrangements. Assistance to this group is crucial and may involve providing materials, tools, or financial support rather than direct shelter provision. For those requiring dedicated facilities, a distinction is made between immediate emergency shelter, which offers basic protection from the elements, and more durable intermediate shelter, which provides a safer and more private living space for a transitional period. In urban disasters, short-term shelter in existing buildings, such as schools or community halls, is often a rapid and effective option. When new settlements are necessary, the process of site selection and arrangement is critical. Ideal sites must be chosen based on factors like safety from hazards, access to water, and proximity to services. The physical arrangement of emergency settlements must be planned to ensure adequate space, sanitation, and access for all residents, mitigating risks of disease and social conflict. The goal is to provide a secure and dignified environment while planning for more permanent solutions.

Based on the above source, attempt the following five questions.

291. What form of support is suggested for "self-sheltering populations"?
(A) Mandatory relocation to organized emergency settlements.
(B) Exclusive access to short-term shelter in existing buildings.
(C) Provision of materials, tools, or financial assistance.
(D) Training in advanced construction techniques for permanent housing.

NODIA

292. How does the passage differentiate "intermediate shelter" from "emergency shelter"?
(A) Intermediate shelter is more durable and provides a safer, more private living space.
(B) Emergency shelter is used in urban areas, while intermediate shelter is for rural areas.
(C) Emergency shelter is provided by NGOs, while intermediate shelter is government-funded.
(D) Intermediate shelter is only for self-sheltering populations.

293. According to the source, what is a key consideration during the site selection for emergency settlements?
(A) The aesthetic appeal of the landscape.
(B) The site's proximity to major tourist attractions.

for affected communities. Understanding these diverse theoretical approaches is crucial for designing communication strategies that are not only clear but also resonant and effective in promoting public safety.

Based on the above source, attempt the following five questions.

271. What is the primary difference between sender-oriented and receiver-oriented views of communication in disaster management?
(A) Sender-oriented views focus on audience perception, while receiver-oriented views focus on message delivery.
(B) Sender-oriented views are ethical, while receiver-oriented views are purely technical.
(C) Sender-oriented views prioritize message creation, while receiver-oriented views prioritize audience interpretation.
(D) Sender-oriented views apply only to traditional media, while receiver-oriented views apply to social media.

272. A normative perspective on disaster communication, as described in the source, would most likely advocate for communication that is:
(A) primarily focused on maintaining the authorities' control over the narrative.
(B) truthful, transparent, and empowering for the affected public.
(C) designed to withhold sensitive information to prevent public panic.
(D) crafted using complex technical jargon to ensure accuracy.

273. The passage mentions the "seven traditions of communication" to illustrate that:
(A) there is only one correct way to approach disaster communication.
(B) communication models are no longer relevant in modern disaster management.
(C) sender-oriented views are superior to receiver-oriented views.
(D) disaster communication can be analyzed from multiple theoretical perspectives.

274. If a disaster manager focuses on how social interactions and shared language shape a community's understanding of a flood warning, which of the seven traditions of communication are they most closely applying?
(A) The socio-cultural tradition.
(B) The cybernetic tradition.
(C) The phenomenological tradition.
(D) The socio-psychological tradition.

275. According to the paragraph, what is the overarching role of risk communication in disaster management?
(A) To exclusively disseminate official orders from emergency authorities.
(B) To control public opinion and suppress dissenting views.
(C) To facilitate an informed dialogue about hazards and safety measures.
(D) To document the communication process for academic research.

Direction : Please read the following source carefully.

The effectiveness of disaster warnings as a form of risk communication is heavily dependent on audience reception, which is shaped by a confluence of psychological and cultural factors. The simple issuance of a warning does not guarantee compliance; its success hinges on public risk perception—the subjective judgment people make about the characteristics and severity of a risk. This perception is, in turn, influenced by their level of hazard awareness, which is the extent to which they understand the nature of the hazard and their personal vulnerability to it. Cultural influences play a profound role in this process, as different societies and communities interpret and respond to risk information in unique ways based on their values, beliefs, and past experiences. The Cultural Cognition Theory of Risk offers a compelling framework for understanding these dynamics. This theory posits that individuals tend to form risk perceptions that align with the values of their social groups. Consequently, people with different cultural worldviews (e.g., individualistic vs. communitarian) may react very differently to the same warning message. This approach helps explain why scientific evidence alone is often insufficient to produce consensus on risk and why the adoption of hazard adjustment measures varies so widely among different populations.

Based on the above source, attempt the following five questions.

Downloaded from www.pdf.tube

coordinated by a lead agency.
(C) An individual volunteer's personal skills.
(D) A single piece of equipment like a bulldozer.

300. The source suggests that the ESF framework helps to manage a disaster response in a more organized way by:
(A) assigning a lead agency to coordinate efforts within a specific functional area.
(B) replacing the need for on-the-ground responders with automated systems.
(C) centralizing all decision-making in a single individual.
(D) limiting the involvement of non-governmental partners in the response.

www.nodia.in

NODIA

the disaster response.

282. The passage identifies which of the following as a significant ethical issue in disaster communication by the media?
(A) Failing to criticize government response efforts sufficiently.
(B) Invading the privacy of victims and graphically portraying suffering.
(C) Over-emphasizing the resilience and coping capacity of victims.
(D) Refusing to broadcast any information until it is officially verified.

283. The source suggests that biases and stereotypes in news media coverage of disasters can lead to:
(A) more efficient and equitable allocation of international aid.
(B) a distorted public perception and an inequitable distribution of assistance.
(C) a decrease in public interest and a drop in media viewership.
(D) increased trust between the affected population and emergency responders.

284. According to the paragraph, a critical understanding of news media coverage involves:
(A) recognizing the potential for bias and unethical practices in reporting.
(B) accepting all media reports as objective and factually accurate.
(C) believing that the media's only role is to support government efforts.
(D) concluding that the media has no positive role to play in a crisis.

285. The example of portraying victims as "helpless rather than resilient" is used to illustrate how:
(A) media coverage can accurately reflect the reality on the ground.
(B) ethical reporting always prioritizes the emotional state of victims.
(C) stereotypes in reporting can undermine local coping mechanisms.
(D) media can successfully facilitate international fundraising efforts.

Direction : Please read the following source carefully.

The practice of reporting on disasters involves specific challenges and operational considerations that distinguish it from routine journalism. The concept of newsworthiness often dictates which events receive coverage, with factors like scale, human interest, and proximity influencing editorial decisions. The reporting process can be broken down into distinct phases of disaster reporting, from the initial breaking news stage, which is often chaotic and information-poor, to the follow-up and recovery stages, which allow for more in-depth analysis. Journalists must rely on a variety of sources of news, including official briefings, eyewitness accounts, and expert opinions, and must constantly verify information to maintain accuracy. A checklist for disaster reporting can be an invaluable tool, ensuring that crucial details about safety, relief availability, and official instructions are covered. A particularly critical aspect is media relations during emergency situations. Response agencies must proactively engage with the media to ensure that accurate, timely, and consistent information is disseminated. In the modern era, communication is not limited to traditional outlets. The role of alternative media and the strategic use of social media have become paramount. Tools and applications for social media allow for real-time updates, crowdsourcing of information, and direct engagement with affected populations, representing a significant shift in the crisis communication landscape.

Based on the above source, attempt the following five questions.

286. According to the passage, what does "newsworthiness" in the context of a disaster depend on?
(A) The number of journalists available to cover the event.
(B) The official designation of the event as a national emergency.
(C) The availability of social media coverage from eyewitnesses.
(D) Factors such as the scale of the event, human interest, and proximity.

287. The paragraph describes the initial breaking news phase of disaster reporting as being typically:
(A) rich with verified, in-depth analytical content.
(B) focused on long-term recovery and

Click Here to Buy book on Amazon

8. (A) I and III only
The Incident Response System provides a standardized framework for managing emergency operations on-scene across different jurisdictions and agencies. Its modular structure is built around five core functional areas, including command, operations, planning, logistics, and finance. This system is designed for incidents of all scales and aims to enhance the integration of diverse personnel. By using common terminology, it eliminates confusion and improves overall operational efficiency.

9. (C) Short-term shelter in existing buildings
Utilizing pre-existing public structures like schools or community centers provides an immediate housing solution for displaced populations following a disaster. This approach is categorized as short-term sheltering because these buildings are readily available and possess basic facilities like electricity and sanitation. While effective for initial relief, this is a temporary measure designed to protect survivors from the elements until more durable intermediate housing options become available.

10. (A) To leverage local knowledge and resources for immediate relief.
Community Based Organizations are essential in the initial stages of disaster response due to their proximity and deep understanding of local dynamics. They possess specialized knowledge regarding vulnerable residents, local geography, and available resources that external agencies might lack. By mobilizing grassroots networks, these organizations can deliver culturally appropriate and rapid assistance. Their involvement ensures that relief efforts are grounded in the actual needs.

11. (D) Apply direct, firm pressure on the wound with a clean cloth.
When dealing with severe bleeding from a deep cut, the immediate priority in first aid is to control the loss of blood. Applying direct and firm pressure to the site of the injury is the most effective initial method to encourage clotting and slow down hemorrhaging. This action must be taken quickly before attempting other procedures to prevent the victim from entering hypovolemic shock.

12. (B) ESFs provide a structure for coordinating inter-agency incident support.
Emergency Support Functions organize various government and private resources into functional groups to facilitate a coordinated response to disasters. These functions streamline the delivery of essential services like transportation, communication, and medical care by assigning lead agencies to specific roles. This framework ensures that multiple organizations can work together seamlessly, avoiding duplication of efforts and ensuring that critical needs are met systematically during a major emergency.

13. (A) I, IV, II, III
Media reporting on disasters follows a logical progression that mirrors the phases of emergency management. Initially, coverage focuses on preparedness and mitigation to educate the public. As a specific threat emerges, reporting shifts to warning dissemination. Following the disaster impact, immediate coverage highlights damage and rescue efforts. Finally, the focus moves toward long-term reconstruction and recovery, analyzing lessons learned and the rebuilding of the affected community.

14. (B) The role of feedback and shared meaning creation.
Communication models in disaster management vary based on whether they focus on the transmission of information or the exchange of understanding. Sender-oriented views prioritize the efficient delivery of messages from authorities to the public. In contrast, receiver-oriented views emphasize the importance of feedback, cultural context, and the co-creation of meaning. This approach ensures that information is not only received but also interpreted correctly by the audience.

15. (B) Statement I is incorrect but Statement II is correct.
The India Disaster Resource Network is a sophisticated web-based platform serving as a comprehensive national inventory for emergency management. It provides real-time data on the availability of critical equipment, specialized supplies, and skilled human resources across various districts. Contrary to being a manual directory, this digital system facilitates rapid resource mobilization during crises. It enables

NODIA

understand how information is collected, analyzed, and shared between different agencies. By improving these feedback mechanisms, the center can reduce uncertainty and ensure that decision-making is based on the most accurate and current situational data available.

62. (D) Focusing disproportionately on sensational aspects like looting while ignoring community solidarity.
A common challenge in disaster journalism is the tendency to focus on sensational stories that emphasize chaos, such as looting or social disorder. This bias often ignores the much more common reality of community solidarity and self-help efforts. By over-emphasizing negative stereotypes, the media can create an inaccurate perception of the affected population and the overall situation. Responsible reporting should aim for a balanced perspective that acknowledges both the challenges and the resilience of the community.

63. (A) Simple Triage and Rapid Treatment (START)
The START system is a widely used triage method designed for first responders to quickly assess and categorize victims in a mass casualty incident. It focuses on three simple clinical criteria: respiration, perfusion, and mental status. This allows for the rapid sorting of large numbers of people into color-coded categories, ensuring that medical resources are prioritized for those who need them most. The simplicity of the system makes it effective even in high-stress environments.

64. (A) III, II, I, IV
The chain of survival for cardiac arrest consists of a sequence of critical actions that must be taken to maximize the victim's chance of recovery. It starts with the immediate recognition of the arrest and calling for emergency help. This is followed by high-quality chest compressions to maintain blood flow. Rapid defibrillation is then used to restore the heart's rhythm. Finally, the victim receives advanced medical care and post-arrest support from healthcare professionals.

65. (B) Statement I is incorrect but Statement II is correct.
An Emergency Operation Center does not serve as a location for hands-on activities like search and rescue; those occur in the field. Instead, the center acts as a centralized coordination hub where senior leaders manage the overall response. Its primary responsibilities include information management, strategic decision-making, and resource allocation. By separating these management functions from tactical field operations, the center ensures a more organized and efficient response across all agencies involved in the disaster.

66. (A) Check for responsiveness and breathing.
When encountering an unconscious person, the first responder's priority is to assess the victim's vital signs. This involves checking if the person is responsive to verbal commands or a gentle tap and determining if they are breathing normally. This initial assessment is critical for deciding whether to begin life-saving interventions like CPR. Responders should avoid shaking the person or giving them anything to drink, as these actions could worsen the situation or cause choking.

67. (D) I, II, III, IV, and V
Effective warning dissemination requires using every available communication tool to reach as many people as possible. Radio and television are traditional channels for broad alerts, while social media provides rapid updates to a connected audience. More localized methods, such as public address systems on vehicles, door-to-door warnings, and announcements in religious centers, are essential for reaching people who may not have access to technology. This multi-layered approach ensures that life-saving information is delivered to everyone.

68. (D) Detail a plan for the hospital to continue functioning and manage a surge of patients during a disaster.
The primary purpose of a hospital's emergency management plan is to ensure that the facility remains operational and can handle the sudden increase in patients that follows a disaster. The plan includes protocols for surge capacity, staff mobilization, and the protection of critical resources. By preparing for these challenges, the hospital can continue to provide life-saving care to both disaster victims and existing patients, while also ensuring the safety of its staff and visitors.

Downloaded from www.pdf.tube

attract more patients are completely irrelevant and inappropriate in this context. The focus remains strictly on life-saving operations and maintaining the safety of current patients.

24. (A) Ensure the right information is available to the right people at the right time.
Information management systems are vital for effective disaster response as they organize the massive flow of data generated during a crisis. The primary goal is to collect, verify, and analyze information to support informed decision-making by emergency managers. By ensuring that accurate and timely data reaches the appropriate responders, these systems facilitate efficient resource allocation and improve the overall coordination of rescue and relief efforts.

25. (B) I and III only
Evacuation and search and rescue are fundamental life-saving operations conducted during the immediate response phase of a disaster. Evacuation involves the systematic movement of people from high-risk zones to designated safe areas to prevent casualties. Search and rescue operations focus on locating individuals trapped in debris and providing the necessary extrication and stabilization. These actions prioritize human safety, unlike long-term relief or reconstruction, which address infrastructure needs later.

26. (A) The organized response to mitigate health impacts on populations.
Health in emergencies encompasses the comprehensive medical and public health actions taken to manage the health consequences of a disaster. This includes providing emergency medical care to the injured, managing disease outbreaks, and ensuring the continuity of essential health services like maternal care or chronic disease management. The goal is to reduce mortality and morbidity by addressing both immediate trauma and the secondary health risks.

27. (D) Strategies must be adapted to the cultural context of the target audience.
Cultural influences play a critical role in how risk messages are received and interpreted by different communities. Effective disaster communication must consider local beliefs, languages, and social structures to ensure that warnings are understood and followed. Ignoring cultural context can lead to mistrust or the rejection of life-saving advice. Therefore, communication strategies must be tailored to align with the values and traditions of the specific target population.

NODIA

28. (B) A television broadcast that delivers a one-way warning message from authorities.
A sender-oriented view of communication focuses on the linear transmission of a message from a source to a receiver. In disaster management, this is best exemplified by official one-way broadcasts, such as a televised emergency warning where authorities provide instructions to the public without immediate opportunity for dialogue. The emphasis is on the clarity and reach of the message rather than the interactive creation of shared meaning.

29. (B) II, IV, I, III
Providing effective first aid requires a systematic approach to ensure the safety of both the responder and the victim. The process begins with assessing the scene for immediate dangers. Once safe, the responder performs a primary survey to check the victim's responsiveness and breathing. Professional medical help is then summoned while the responder provides specific care, such as controlling bleeding or supporting fractures, until advanced help arrives.

30. (D) Prevent the outbreak and spread of vector-borne diseases.
In emergency settlements, the concentration of large populations in temporary conditions often leads to increased risks of disease transmission. Vector and pest control measures are implemented to manage the populations of insects and rodents that can carry dangerous pathogens. By reducing the presence of mosquitoes, flies, and rats, health officials can prevent the outbreak of diseases like malaria, dengue, or cholera, protecting the displaced population.

31. (B) Statement I is incorrect but Statement II is correct.
Media coverage of disasters is not always neutral and can be influenced by inherent biases or the desire for sensational stories. While reporters aim for accuracy, they sometimes focus disproportionately on scenes of chaos or portray victims as passive and helpless. These portrayals

can perpetuate harmful stereotypes and ignore the resilience and self-help efforts of the affected community. Recognizing these challenges is essential for improving the quality of disaster journalism.

32. (B) Preventing the immediate outbreak of a major epidemic from dead bodies.
Contrary to common myths, human remains from natural disasters generally do not pose an immediate risk of a major epidemic. Most pathogens that cause such outbreaks do not survive long in a deceased host. However, the identification and respectful handling of bodies remain crucial for providing closure to families, fulfilling legal requirements for death certification, and ensuring accurate casualty records. These processes are essential for the humanitarian and administrative recovery.

33. (C) I, II, III, IV, and V
Resource management and networking involve the comprehensive coordination of all assets and communications required for an effective response. This includes deploying specialized medical personnel and heavy machinery to the affected areas. It also encompasses establishing robust communication links between agencies and distributing life-sustaining relief supplies. Compiling and sharing situational reports within the coordination center ensures that all stakeholders have the necessary information to manage these resources efficiently.

34. (A) Hazard awareness is knowing a threat exists, while risk perception is the subjective judgment about its severity and likelihood.
Hazard awareness refers to the factual knowledge that a particular natural or man-made threat, such as an earthquake or flood, exists in a given area. Risk perception is more complex, as it involves an individual's subjective interpretation of that hazard. This perception is influenced by personal experience, cultural values, and the perceived effectiveness of protective measures. Understanding this difference is vital for designing communication strategies that motivate public action.

35. (C) A transitional solution bridging emergency and permanent housing.
Intermediate shelter refers to the transitional housing solutions provided to displaced people after the immediate emergency phase but before permanent reconstruction is completed. These structures are more durable than tents and offer better protection and privacy for families. They are designed to support a semi-stable life for months or even years, allowing individuals to restart their daily routines and livelihoods while waiting for long-term housing solutions to be finalized.

36. (A) Both A and R are true and R is the correct explanation of A.
The Incident Response System significantly improves the ability of different emergency agencies to work together seamlessly during complex operations. By establishing a uniform organizational structure and common terminology, it removes communication barriers that often hinder multi-agency responses. This standardization allows personnel from various backgrounds to integrate into a single management framework efficiently. Consequently, responders can share resources and information more effectively, leading to a more synchronized and successful disaster management effort.

37. (C) Ensuring adequate drainage and avoiding low-lying, flood-prone areas.
Selecting an appropriate site for an emergency settlement is a critical technical task that directly impacts the health and safety of displaced residents. Planners must prioritize locations with natural drainage and avoid low-lying areas that are vulnerable to flooding during seasonal rains. Proper site arrangement also ensures that shelters are positioned to minimize fire risks and that there is sufficient space for essential services like water points and sanitation facilities.

38. (B) P-3, Q-4, S-1, R-2
The seven traditions of communication provide various lenses for analyzing disaster management. The rhetorical tradition focuses on the art of persuasion used in warning messages. The cybernetic tradition examines the flow of information and feedback within an operation center. The socio-cultural tradition looks at how communication maintains social order in affected communities, while the critical tradition

Click Here to Buy book on Amazon

questions power dynamics and potential inequalities in the distribution of humanitarian aid.

39. (B) Triage
Triage is the essential process of rapidly assessing and sorting patients based on the urgency of their medical needs. In a mass casualty situation where resources are overwhelmed, this system ensures that patients with life-threatening but treatable injuries receive care first. By using standardized categories, medical personnel can optimize the use of limited staff and equipment to save the maximum number of lives, rather than treating people on a first-come basis.

40. (A) Using the most technologically advanced communication channel regardless of accessibility.
Ethical disaster communication requires ensuring that vital information is accessible to all segments of the population, regardless of their access to advanced technology. Relying solely on high-tech channels can exclude vulnerable groups like the elderly or those in remote areas. Other ethical considerations include respecting the dignity of victims, maintaining accuracy to prevent panic, and avoiding sensationalism. Providing inclusive communication is a fundamental responsibility of authorities and media outlets during a crisis.

41. (C) I, III, and IV only
A robust hospital preparedness plan must address both the physical safety of the building and the operational readiness of the staff. This includes securing heavy equipment and ensuring structural integrity to withstand hazards. The plan must also guarantee the continuity of essential utilities like power and water. Regular staff training and emergency drills are critical for ensuring that medical personnel can execute their roles effectively under the stress of an actual disaster.

42. (A) People who find their own shelter solutions, often by staying with relatives or in second homes.
Self-sheltering refers to the behavior of individuals who, after being displaced by a disaster, find their own temporary accommodation instead of using official government-run camps. This often involves staying with family members, friends, or in their own secondary properties. Supporting these populations is important for emergency managers, as it reduces the burden on public shelters and often leads to a faster and more sustainable recovery for the affected families.

43. (D) A deployable team of health professionals trained for emergencies.
A Health Emergency Team is a specialized, multi-disciplinary group of medical professionals, such as doctors, nurses, and paramedics, who are trained to deploy rapidly to disaster zones. Their role is to provide immediate medical assistance, support local health facilities, and help manage public health risks in the affected area. These teams are essential for augmenting the local healthcare capacity when it is overwhelmed by a sudden influx of casualties.

44. (B) The ideal, ethical, and most effective ways communication should occur.
A normative perspective on communication focuses on establishing standards and principles for how messages should ideally be constructed and delivered. In the context of disasters, this perspective examines the ethical responsibilities of authorities and the media to provide accurate, timely, and accessible information. It seeks to define the best practices that ensure public safety, protect human dignity, and foster trust between the government and the community during a crisis.

45. (C) Resource Management & Networking
The India Disaster Resource Network is a vital component of the resource management and networking framework in emergency response. It serves as a centralized, web-based inventory that lists the availability of specialized equipment and skilled personnel across the country. By providing this information to emergency managers, the network facilitates the rapid identification and mobilization of the exact assets needed to respond to a specific disaster, improving overall operational efficiency.

46. (D) To manage resources to provide care for a large number of victims.
The primary goal of Mass Casualty Management is to provide the best possible care to the greatest number of victims within the constraints of limited resources. When a disaster occurs,

Downloaded from www.pdf.tube

Social media tools have transformed disaster communication by enabling instantaneous two-way information flow. Twitter, in particular, allows authorities to reach a massive audience quickly with urgent updates. Simultaneously, it provides responders with real-time reports and photos from people on the ground, which can significantly improve situational awareness. While accuracy can be a challenge, the speed and reach of these platforms make them indispensable for modern emergency management, especially during rapidly evolving situations.

77. (C) Proper management of solid waste and drainage systems.
Vector and pest control in emergency settlements are primarily achieved through maintaining high standards of environmental sanitation. Proper management of solid waste prevents the buildup of organic matter that attracts rodents and flies. Similarly, ensuring adequate drainage prevents stagnant water from becoming breeding grounds for mosquitoes. These environmental controls are far more effective and sustainable than relying solely on chemical treatments for preventing the spread of diseases like malaria and cholera in crowded camps.

78. (D) Communication is a critical, cross-cutting function essential in all phases of the disaster management cycle.
Communication is not a secondary activity but a fundamental pillar of effective disaster management. It is essential in every phase, from educating the public about mitigation and preparedness to issuing life-saving warnings and coordinating the response. During recovery, communication helps communities understand the rebuilding process and access support services. Without clear and timely communication, even the best-resourced response can fail due to confusion, panic, and a lack of coordination among the various stakeholders.

79. (A) Statement I is correct but Statement II is incorrect.
Prehospital care encompasses all medical interventions provided to a patient before they reach a definitive care facility like a hospital. This care can be delivered by a wide range of people, including trained bystanders, first responders, and professional paramedics. It is not limited to specialized doctors; in fact, the most common forms of prehospital care are basic life support and initial stabilization provided by the first people at the scene. This early care is critical for improving survival rates.

80. (B) Ensuring affected populations can reach and receive health services.
Access for emergency health services focuses on removing the physical, financial, and social barriers that might prevent disaster victims from receiving medical care. This involves ensuring that transportation is available to reach clinics, that health services are located near affected populations, and that care is provided to everyone regardless of their ability to pay. Ensuring access is a critical component of humanitarian response, as it directly impacts the recovery and survival of the most vulnerable individuals.

81. (B) Broadcasting an interview with an identifiable, grieving survivor without their informed consent.
Ethical disaster reporting requires a careful balance between the public's right to know and the victim's right to privacy and dignity. Interviewing a grieving survivor without their full understanding and consent can be highly exploitative and may cause additional trauma. Journalists have a responsibility to treat victims with respect and avoid sensationalizing their suffering for higher ratings. This ethical consideration is central to maintaining the integrity of the profession and protecting vulnerable individuals during a crisis.

82. (A) Centralized command and control for public health assets.
The Public Health Emergency Operations Centre framework is built on the concept of centralized management for health-related crisis response. It provides a structured environment where health officials can coordinate the deployment of medical teams, the distribution of supplies, and the analysis of epidemiological data. By centralizing these assets, the center ensures that the public health response is efficient, synchronized, and based on the most current information, which is vital for managing outbreaks or large-scale trauma.

83. (C) III, II, I

NODIA

54. (B) Ensuring that routine and essential health services are not completely disrupted during an emergency.
Continuity in emergency health services refers to the hospital's ability to maintain critical medical functions while simultaneously managing a surge of disaster victims. This includes ensuring that life-saving treatments for chronic illnesses, maternal care, and emergency surgeries are not neglected during the crisis. Effective planning identifies the essential services that must continue and establishes protocols for allocating resources and staff to maintain these vital functions even under extreme pressure and resource constraints.

55. (A) P-4, Q-1, S-2, R-3
Different emergency response actions serve specific primary objectives within the overall management of a disaster. Evacuation is designed to move people from threatened areas to safety. Search and rescue operations focus on locating and stabilizing individuals trapped in debris. Warning dissemination aims to inform the public about impending threats. Relief operations are focused on providing the life-sustaining resources, such as food and water, that the affected population needs for survival and initial recovery.

56. (A) Permanent, fixed hierarchical structure
The Incident Response System is characterized by its modular and flexible organization, which allows it to expand or contract based on the size and complexity of the incident. It is not a permanent or fixed hierarchy but rather a management system that is activated only when needed. Key features include a manageable span of control, the use of common terminology, and unity of command, ensuring that all responders operate under a single, coordinated framework.

57. (C) Include specific information on what people can do to protect themselves.
Effective disaster warnings must go beyond simply identifying a hazard; they must function as actionable risk communication. This means the message should provide clear and specific instructions on what the public should do to stay safe, such as evacuation routes or shelter-in-place procedures. By providing these protective actions, the warning empowers individuals to take responsibility for their own safety, which significantly reduces the potential for casualties and enhances the overall community response.

58. (C) I, II, and III only
Emergency Support Functions organize various government and private resources into functional groups to facilitate a coordinated response to disasters. These functions streamline the delivery of essential services like transportation, communication, and medical care by assigning lead agencies to specific roles. This framework ensures that multiple organizations can work together seamlessly, avoiding duplication of efforts and ensuring that critical needs are met systematically. The structure is applicable at local, state, and national levels.

59. (D) Avoid any unnecessary movement, especially if a spinal injury is suspected.
Proper handling of injured persons in pre-hospital care is essential for preventing further trauma. If a spinal injury is suspected, any movement could lead to permanent paralysis or other severe complications. Therefore, the fundamental principle is to keep the victim as still as possible and stabilize their head and neck until professional medical help arrives. Responders should only move a victim if there is an immediate threat to their life, such as a fire.

60. (B) To provide accurate, timely, and coordinated information to the media for public dissemination.
Media relations during emergencies focus on establishing a reliable flow of information between response agencies and the public. By providing journalists with verified facts and consistent updates, authorities can ensure that the public receives accurate life-saving information. This coordination helps to manage rumors and reduce panic. The goal is to use the media as a strategic partner to reach a wide audience with critical warnings and instructions, thereby improving the overall effectiveness of the response.

61. (C) The Cybernetic Tradition
The cybernetic tradition of communication focuses on the study of complex systems, information processing, and feedback loops. In disaster management, this perspective is particularly relevant to the functioning of an Emergency Operation Center. It helps managers

Click Here to Buy book on Amazon

decision-makers to identify and deploy necessary assets quickly, ensuring a coordinated response.

16. (B) A community radio program run by local volunteers.
Alternative media refers to communication channels that operate outside the mainstream corporate or government-controlled networks. During a crisis, community-run radio stations serve as a primary example because they are managed by local volunteers and focus on the specific needs of their immediate area. These platforms provide a space for grassroots voices and hyper-local information that larger news outlets might overlook, fostering community resilience and solidarity.

17. (B) II, III, and V only
While initial settlement efforts focus on immediate survival needs like food and sanitation, long-term sustainability requires addressing complex social and economic factors. Provision of livelihood opportunities is essential for restoring self-sufficiency among displaced people. Additionally, establishing robust governance structures and ensuring community participation are vital for maintaining order. Planners must also manage the integration of the settlement with host communities to prevent social conflict and resource depletion.

18. (A) To coordinate the public health response to an emergency.
A Public Health Emergency Operations Centre serves as the nerve center for managing medical and health-related aspects of a crisis. Its primary function is to collect and analyze health data, manage resources like medical teams or vaccines, and coordinate activities among different health agencies. By centralizing these operations, the center ensures a synchronized and evidence-based response to disease outbreaks, natural disasters, or other health emergencies.

19. (C) Timeliness, proximity, and impact
Newsworthiness in disaster reporting is determined by specific criteria that gauge the significance of an event for the audience. Timeliness ensures that the information is current and relevant to the unfolding situation. Proximity refers to the geographic or emotional closeness of the event to the viewers. Impact measures the scale of the disaster, including the number of people affected and the extent of damage.

20. (D) A is false but R is true.
Mass Casualty Management operates under the ethical and practical necessity of resource prioritization during extreme events. While medical professionals always strive for quality care, the overwhelming number of victims makes it impossible to provide comprehensive individual attention to everyone simultaneously. The guiding principle is therefore shifted toward utilitarian goals, focusing on performing the greatest good for the greatest number. This involves systematic sorting and resource allocation.

21. (C) Cultural Cognition Theory of Risk
Cultural Cognition Theory explains that individuals do not perceive risks in a purely objective or scientific manner. Instead, their perceptions are deeply influenced by the cultural values and social identities they share with their peer groups. People tend to interpret information about threats in a way that reinforces their existing worldviews. This theory is crucial for disaster communication as it highlights why different groups may react differently.

22. (B) P-3, Q-4, S-1, R-2
Social media tools serve distinct roles during humanitarian crises based on their unique functionalities. Twitter is highly effective for the rapid dissemination of short, real-time news updates. Facebook facilitates the creation of community support groups and allows individuals to mark themselves as safe. Ushahidi utilizes crowdsourced data to create maps of crisis areas, while Google Person Finder provides a searchable database to help families locate missing loved ones.

23. (D) A marketing plan to attract more patients during the disaster
A Hospital Emergency Disaster Management Plan is designed to ensure that a medical facility can continue functioning and handle an increased patient load during a crisis. Core components include surge capacity protocols, staff scheduling, and coordination with other health services. Marketing strategies intended to

NODIA

69. (A) Both A and R are true and R is the correct explanation of A.
Cultural cognition theory explains that individuals often interpret scientific information about risks through the lens of their social identities and cultural values. This means that two different groups can look at the same data about a hazard and reach completely different conclusions about its severity. For disaster communicators, this highlights the necessity of framing risk messages in a way that resonates with the specific worldviews of the target audience to ensure effective action.

70. (B) Providing long-term housing and reconstruction grants.
Disaster Response Forces are specialized units trained for immediate, life-saving activities during the response phase. Their roles include search and rescue, medical first response, and clearing access routes to facilitate relief. They are also involved in community capacity building and awareness. However, the long-term tasks of providing housing and financial grants for reconstruction are managed by other government departments and development agencies, as these require different skills and long-term economic planning.

71. (B) P-4, Q-3, S-1, R-2
Effective disaster communication relies on various actors playing specific, complementary roles. The media disseminates information broadly and acts as a watchdog. Emergency managers provide verified data and coordinate the overall message. Scientists offer simplified explanations of technical hazards and their risks. Community leaders translate these official messages into a local context, building trust and mobilizing grassroots action. Together, these entities ensure that the public receives accurate, timely, and culturally appropriate information to stay safe.

72. (A) The way media coverage evolves from pre-disaster warnings to post-disaster recovery stories.
The phases of disaster reporting describe the shifting focus of media coverage as a crisis unfolds. It begins with pre-disaster reporting on risks and warnings. This is followed by immediate coverage of the disaster's impact and the heroic efforts of rescuers. Over time, the narrative shifts toward the challenges of recovery, the needs of survivors, and eventually, a critical analysis of the response and the long-term rebuilding process. This evolution mirrors the disaster management cycle.

73. (C) The individual's perception of risk and their belief in the effectiveness of protective measures.
Hazard adjustment refers to the protective actions individuals take to reduce their vulnerability to a disaster. This decision is rarely based on scientific facts alone; instead, it is driven by an individual's personal perception of the risk and their confidence that a specific action, like retrofitting a home or evacuating, will actually work. If people do not believe a threat is serious or that they can protect themselves, they are unlikely to make any adjustments.

74. (A) I and III only
First aid triage is a systematic process of sorting patients based on the urgency of their medical needs to maximize the number of lives saved. It prioritizes patients with life-threatening injuries that can be successfully treated with available resources. Minor injuries are typically sorted into a lower priority category to allow responders to focus on the most critical cases. The process uses standardized categories to ensure that medical help is directed where it is most needed during a crisis.

75. (D) To collect, process, analyze, and disseminate incident-related information.
An Information Management System is the technical backbone of an Emergency Operation Center. Its primary role is to manage the vast amount of data generated during a disaster, transforming raw information into actionable situational awareness. By collecting, verifying, and analyzing reports from the field, the system provides decision-makers with a clear picture of the incident. This allows for more effective resource allocation and ensures that all responding agencies are operating with the same accurate information.

76. (B) The ability to disseminate information rapidly to a wide audience and receive real-time updates from the ground.

Downloaded from www.pdf.tube

the sudden surge of patients often exceeds the immediate capacity of the local health system. Therefore, management focuses on efficient resource allocation, systematic triage, and coordinated transportation to ensure that medical interventions are prioritized for those who will benefit most.

47. (A) I, II, IV, III, V
The management of human remains after a disaster follows a specific logical sequence to ensure accuracy and respect. The process begins with the recovery and transport of bodies to a mortuary. Forensic specialists then collect post-mortem data from the remains. Separately, ante-mortem information is gathered from the families of missing persons. Finally, these two sets of data are reconciled to achieve a definitive identification, allowing for the return of remains for burial.

48. (B) Statement I is incorrect but Statement II is correct.
Effective warning dissemination is rarely achieved through a single communication channel, as different segments of the population use different technologies. A multi-channel approach that combines sirens, television, radio, and mobile alerts increases the likelihood that the message will reach everyone in time. Additionally, using community messengers and local leaders can enhance the credibility of the warning. This redundancy ensures that even if one system fails, the life-saving information is still delivered to the public.

49. (B) The set of actions to clean, treat, and dress a wound to prevent infection and control bleeding.
Wound management in pre-hospital care focuses on the immediate stabilization of an injury to prevent further complications. This involves cleaning the wound to remove contaminants and applying sterile dressings to stop bleeding and protect the area from infection. While not as complex as surgery, these actions are critical for the patient's recovery and for preventing life-threatening conditions like sepsis. Proper wound care at the scene significantly improves the long-term medical outcomes for the victim.

50. (D) I, II, III, IV, and V
The emergency response phase includes all critical actions taken immediately after a disaster strikes to save lives and stabilize the situation. This encompasses issuing warnings and conducting evacuations to remove people from danger. Search and rescue teams work to find survivors, while first aid providers manage initial medical needs. Simultaneously, relief operations are launched to distribute essential supplies like food and water. All these components are essential for an effective and comprehensive response.

51. (C) Directing and managing the official search and rescue operations.
While the media plays an essential role in informing the public and providing a platform for affected voices, it does not have the authority or expertise to manage search and rescue operations. Those tasks are the responsibility of specialized government and emergency agencies. The media's role is to act as a watchdog, reporting on the effectiveness of the response and helping the public understand the risks and necessary safety precautions during a humanitarian crisis.

52. (D) Ensure they cover key aspects of the story accurately and ethically.
A checklist for disaster reporting is a valuable professional tool that helps journalists maintain high standards during the chaotic environment of a crisis. It ensures that they cover essential elements like casualty figures, safety instructions, and the needs of the survivors. By following such a guide, reporters can avoid sensationalism, verify their sources, and ensure that their reporting is both accurate and respectful of the dignity of those affected by the disaster.

53. (A) Both A and R are true and R is the correct explanation of A.
Supporting self-sheltering populations, such as those staying with relatives, is a strategic component of a comprehensive shelter response. By providing these individuals with essential resources like food or cash assistance, authorities can prevent them from having to move into official emergency camps. This approach reduces the pressure on public facilities and allows families to stay in a more stable environment, which typically speeds up their long-term recovery and lessens the social impact.

NODIA

Shelter provision following a disaster typically follows a logical chronological progression. It starts with immediate emergency shelter, such as tents or the use of public buildings, to protect survivors from the elements. This is followed by intermediate or transitional shelter, which provides more durable and private accommodation while reconstruction begins. The final stage is permanent housing, where residents move into reconstructed or newly built homes, signifying the completion of the long-term recovery process for their living situation.

84. (A) Both A and R are true and R is the correct explanation of A.
Hospital safety and preparedness is a comprehensive concept that includes both the physical resilience of the building and its operational capability. A structurally sound hospital is of little use if its internal systems fail or if the staff is not prepared for a crisis. Effective preparedness requires having robust plans for surge capacity, ensuring backup systems for water and power are functional, and conducting regular training and drills so that personnel can operate efficiently during an actual disaster.

85. (C) Guideline for media to choose their own "disaster hero" story.
Standard Operating Procedures are technical documents that provide clear, step-by-step instructions for essential response tasks, such as activating an operations center or setting up a relief camp. They are designed to ensure coordination and efficiency among responders. Guidelines for media storytelling are not part of these professional response protocols, as they belong to the realm of journalism and public relations. SOPs focus strictly on the operational and logistical aspects of managing a disaster.

86. (A) I, II and IV only
Community Based Organizations are vital actors in disaster response due to their immediate presence and deep local knowledge. They often act as the very first responders, providing help before official agencies arrive. Their understanding of the local culture and social dynamics makes their relief efforts more acceptable and effective. While they are crucial partners, they are typically grassroots groups rather than well-funded international organizations. Their strength lies in their community connections rather than their financial resources.

87. (D) The transactional model
The transactional model of communication views the exchange of information as a dynamic process where both parties are simultaneously senders and receivers. When applied to disasters, this model emphasizes the co-creation of meaning and mutual understanding between authorities and the public. It moves away from top-down messaging and encourages dialogue and feedback, which is essential for building trust and ensuring that the public understands and cooperates with life-saving instructions and relief efforts.

88. (A) Ensure a variety of voices (officials, experts, victims, responders) are included for a balanced story.
A source checklist is a vital tool for disaster reporters to ensure their coverage is balanced and comprehensive. By including a variety of perspectives, such as those of government officials, technical experts, first responders, and the victims themselves, the reporter can provide a more accurate and nuanced picture of the situation. This prevents the story from being one-sided and ensures that the needs and experiences of all affected groups are represented in the public narrative.

89. (A) P-4, Q-3, S-2, R-1
First aid procedures are specifically tailored to the type of injury to prevent further harm. Fractures require immobilization with splints to prevent movement. Minor burns should be cooled with running water to stop the burning process. Severe bleeding is managed with direct pressure to encourage clotting. For suspected spinal injuries, the priority is to keep the victim completely still and stabilize the head and neck, as any movement could lead to permanent damage or paralysis.

90. (C) I, II, III, and IV only
Comprehensive emergency medical preparedness involves several critical proactive steps. This includes stockpiling essential medicines and supplies, training healthcare workers for mass casualty scenarios, and developing detailed response plans. Establishing communication protocols between different hospitals is also vital

Click Here to Buy book on Amazon

for ensuring a coordinated regional response. Ignoring the mental health needs of responders is a major failure in planning, as protecting the well-being of the medical team is essential for maintaining a long-term and effective emergency response.

91. (D) It employs a modular organization that can expand or contract based on the incident's needs.
A defining feature of the Incident Response System is its modular organizational structure. This flexibility allows the system to be scaled up or down depending on the complexity and size of the incident. It uses standardized terminology and a unified command structure to ensure that all agencies can work together seamlessly. This approach makes it effective for managing any type of emergency, whether natural or man-made, and ensures that resources are managed efficiently at the scene.

92. (B) Perception of the risk, trust in the source, and understanding of the message.
The effectiveness of a disaster warning is determined by how the receiver processes the information. If the person perceives the risk as serious, they are more likely to act. Trust in the source issuing the warning is also critical; if the authority is not seen as credible, the message may be ignored. Finally, the message must be clear and easy to understand so that the individual knows exactly what protective actions to take to stay safe.

93. (B) Statement I is incorrect but Statement II is correct.
The identification of human remains after a disaster is a humanitarian imperative rather than a disease prevention measure. While there is a common myth that dead bodies cause epidemics, the real priority is the respectful and accurate identification of victims. This process is essential for providing closure to grieving families and for fulfilling the legal and administrative requirements of the state. Managing remains with dignity is a fundamental principle of disaster management and human rights.

94. (D) The distribution of essential commodities like food, water, and medicine.
Relief operations focus on the immediate provision of life-sustaining assistance to people affected by a disaster. Key activities include the distribution of food, clean water, and basic medical supplies to ensure the survival and well-being of the population. These operations are conducted in the days and weeks following the impact, addressing the urgent needs created by the disruption of normal life. They serve as a bridge to the more complex, long-term tasks of reconstruction and recovery.

95. (A) The set of criteria (e.g., impact, timeliness, prominence) that determine if an event is worthy of being reported as news.
Newsworthiness is a fundamental concept in journalism that describes the factors used by editors to decide which stories to cover. In the context of disasters, an event is considered newsworthy if it has a significant impact on many people, is happening now, or is physically close to the audience. These criteria help the media prioritize information that is most relevant and important for the public to know, ensuring that critical news reaches the audience quickly.

96. (B) To provide a standardized structure for delivering and coordinating necessary support during an incident.
The primary objective of the Emergency Support Function framework is to provide a synchronized and structured approach to disaster response. By grouping various government and private resources into functional categories, such as transportation or medical services, the framework ensures that these assets can be coordinated effectively. This standardization prevents confusion among responding agencies and ensures that the most critical needs are met systematically and efficiently during any large-scale emergency or humanitarian crisis.

NODIA

97. (B) Standardized methods and protocols for sorting patients.
Triage systems are essential medical protocols used to sort and prioritize patients based on the urgency of their condition. These standardized methods ensure that when medical resources are limited, care is directed first to those with life-threatening injuries who are most likely to survive. By using a consistent system of categories, healthcare workers can quickly communicate the status of multiple victims and

ensure that the entire emergency medical team is operating under the same priorities.

98. (A) Criticizing an official press conference for using overly technical jargon that confused the public.
A normative perspective on disaster communication evaluates how messages should ideally be delivered to ensure effectiveness and ethics. Criticizing the use of overly technical jargon in an official briefing is an application of this perspective, as it highlights a failure to meet the standard of providing clear, accessible information to the public. This approach seeks to improve communication practices by ensuring that they serve the primary goal of public safety and understanding during a crisis.

99. (C) A is true but R is false.
While a well-resourced media can be a life-saving partner during a crisis by providing accurate information, its primary humanitarian objective is not the maximization of advertising revenue. In a disaster, responsible media outlets prioritize public service, information dissemination, and accountability. While they are businesses, their role in a crisis is governed by ethical standards that place the needs of the affected population above commercial interests. The media's power to inform is essential for effective emergency management.

100. (D) Planning for fire breaks, access roads, and proximity to water and sanitation facilities.
Planning the arrangement of an emergency settlement is a technical task that directly affects the health and safety of displaced residents. Fire breaks are essential for preventing the rapid spread of flames in crowded conditions, while access roads ensure that relief supplies can be delivered efficiently. Proximity to water and sanitation facilities is vital for maintaining hygiene and preventing disease outbreaks. These structural considerations are critical for creating a safe and manageable environment for the affected population.

101. (C) The organized movement of people away from a threat or hazard.
Evacuation is a fundamental life-saving strategy that involves the systematic and planned movement of individuals from a high-risk area to a designated safe location. This process is triggered when a threat is imminent, such as a hurricane or flood. Effective evacuation requires clear communication, identified routes, and pre-arranged shelter destinations. By removing people from the path of danger, emergency managers can significantly reduce the potential for injuries and loss of life during a disaster.

NODIA

102. (B) Ensuring there is a plan for surge capacity in hospitals.
A key component of planning for emergency health services is ensuring that hospitals can manage a sudden and massive influx of patients. This concept of surge capacity includes plans for mobilizing extra staff, expanding bed availability, and ensuring adequate stockpiles of medical supplies. Without such a plan, even a modern hospital can become overwhelmed by a disaster, leading to a breakdown in care for both the victims of the event and existing patients.

103. (A) I, II and IV only
The media plays a multi-faceted and critical role in disaster management. It acts as a bridge between the affected population and response agencies, helping to communicate needs and relief information. Media outlets are also essential for public education about risks and for disseminating urgent warnings and safety instructions during a crisis. While they aim for objectivity, reporting is rarely free from all internal or external influences. Their primary value lies in their ability to reach a wide audience.

104. (A) To create an efficient and transparent system for locating and mobilizing needed resources.
Resource management and networking systems like the IDRN are designed to ensure that the necessary equipment and personnel can be found and deployed quickly during a disaster. By creating a transparent and centralized inventory of available resources, these systems eliminate the need for time-consuming searches during a crisis. This efficiency allows emergency managers to match the specific needs of the affected area with the nearest available assets, resulting in a more rapid and coordinated response effort.

105. (B) P-3, Q-1, S-4, R-2
Various entities and roles are essential for a coordinated disaster response. A first responder is

Reporting on disasters presents numerous professional and personal challenges for journalists. These include the physical danger of working in disaster zones and the difficulty of accessing affected areas. Reporters also face intense pressure to provide information quickly, which can sometimes conflict with the need for accuracy. Furthermore, covering humanitarian crises can be emotionally traumatic for journalists as they witness widespread suffering. Addressing these challenges is essential for ensuring that media coverage remains accurate, ethical, and sustainable.

135. (D) Linking various government and non-government entities that hold resources to a common platform.
Resource networking in the context of the IDRN involves creating a unified system that connects different organizations holding disaster response assets. By bringing government departments, NGOs, and private companies together on a single platform, emergency managers can gain a complete picture of the equipment and personnel available across the country. This network allows for the rapid identification and mobilization of the best-suited resources to respond to any incident, improving the speed and effectiveness of the overall response.

136. (A) Expand its services and capacity to care for a large influx of patients.
Surge capacity refers to the ability of a healthcare facility to rapidly increase its operations to manage a sudden influx of patients during a disaster. This involves expanding the number of available beds, mobilizing extra medical staff, and ensuring that there are sufficient medical supplies and equipment to treat a large number of victims. Having a robust plan for surge capacity is essential for ensuring that hospitals can continue to provide life-saving care when the community's needs are highest.

137. (C) Individuals who perceive a high level of risk are more likely to adopt protective hazard adjustments.
Risk perception plays a decisive role in whether an individual takes protective action against a hazard. If someone believes that a threat is serious and that it is likely to affect them personally, they are much more likely to adopt adjustments like reinforcing their home or following an evacuation order. Risk communication strategies aim to help the public accurately understand their risk, as this understanding is the primary motivator for taking the steps necessary to stay safe.

138. (A) To pre-identify leadership and resources for specific response functions to improve coordination.
The primary purpose of Emergency Support Functions is to organize the diverse resources of the government and private sector into functional groups for a more coordinated response. By pre-identifying lead agencies and their responsibilities for tasks like transportation or public health, the framework eliminates confusion and duplication of effort during a crisis. This organization allows for the systematic delivery of support and ensures that all critical functions are managed efficiently by the most appropriate and capable organizations.

139. (A) Statement I is correct but Statement II is incorrect.
Using existing public buildings like schools for short-term shelter is an effective way to provide immediate housing for large numbers of people. However, this strategy does have consequences, as it can significantly disrupt the normal functions of those buildings, such as education. Therefore, while these structures are valuable for initial relief, it is essential for emergency managers to transition the displaced population to more sustainable shelter options as soon as possible to allow the community services to return to normal.

140. (B) A pirate radio station broadcasting survival information when official channels are down.
Alternative media often plays a crucial role during disasters when traditional communication channels are unavailable or restricted. A pirate radio station run by local volunteers can provide essential survival information and a voice for the community during a crisis. These platforms offer a decentralized and grassroots perspective that is not subject to corporate or government control. Their presence during an emergency can be a vital resource for maintaining the flow of information and supporting community resilience.

141. (C) The reconstruction and recovery phase

Downloaded from www.pdf.tube

and its internal systems, like water and power, must continue to function. Furthermore, the hospital must have plans and trained staff ready to manage a sudden influx of patients. A safe hospital is one that can continue its life-saving mission even when the surrounding community is in crisis.

113. (A) Both A and R are true and R is the correct explanation of A.
Vector and pest control are essential for protecting the health of people living in emergency settlements. The crowded conditions and the potential breakdown of normal waste and water systems create an ideal environment for pests like mosquitoes and rodents to flourish. These vectors can spread serious diseases, such as malaria or plague, which can quickly become epidemics in a camp setting. Therefore, maintaining environmental sanitation and implementing pest control measures are critical priorities for humanitarian responders.

114. (A) It offers multiple perspectives (e.g., rhetorical, cybernetic, critical) for analyzing and improving complex disaster communication processes.
The seven traditions of communication provide a comprehensive framework for understanding the various ways that information is exchanged and understood during a disaster. By looking at a crisis through these different lenses, managers can improve the flow of data within an operations center, design more persuasive warning messages, and identify potential social inequalities in aid distribution. This multi-dimensional approach leads to more effective and ethical communication strategies that better serve the needs of the affected public.

115. (C) News media bias
Media bias occurs when reporting consistently favors one perspective or focuses on only certain aspects of a story while ignoring others. A reporter who only highlights government failures and overlooks the successful efforts of community-led responses is exhibiting this type of bias. Such reporting can give the public an inaccurate and overly negative view of the situation. Ethical journalism requires a balanced approach that covers all significant aspects of the disaster, including both the challenges and the successes.

116. (D) Do the greatest good for the greatest number of victims.
The fundamental principle of first aid triage is utilitarian, aiming to save the maximum number of lives with the resources available. In a mass casualty situation, medical staff cannot provide comprehensive care to everyone at once. Therefore, they sort patients based on the urgency of their condition and their likelihood of survival. By prioritizing those with life-threatening but treatable injuries, the medical team can ensure that their efforts have the greatest possible impact on overall survival rates.

117. (C) To be deployed to an incident to manage the on-scene response.
An Incident Response Team is a specialized, pre-identified group of professionals who are trained and equipped to manage the response at the scene of a disaster. Their role is to provide on-site leadership, coordinate the activities of various agencies, and ensure that the incident objectives are met efficiently. These teams are essential for bringing order to the chaotic initial environment of a crisis and for ensuring that the tactical operations are conducted safely and effectively.

NODIA

118. (B) A set of pre-established, written instructions for specific tasks.
A Standard Operation Procedure is a formal document that provides clear and consistent instructions for performing routine or critical tasks during a disaster response. These procedures are established before an event occurs to ensure that all responders understand their roles and can perform them correctly even under high stress. By standardizing actions, SOPs improve coordination, reduce errors, and ensure that the response is conducted according to the best available practices and safety standards.

119. (D) A surgeon performing a heart transplant.
Pre-hospital care refers to any medical treatment or stabilization provided to a patient before they reach a hospital. This can include basic life support like CPR, a paramedic administering oxygen in an ambulance, or even simple wound care provided by a school nurse. In contrast, complex surgical procedures like heart transplants are exclusively hospital-based and require a controlled clinical environment and specialized equipment. Pre-

hospital care is focused on initial stabilization and preventing further harm during transport.

120. (A) Public Information Officer (PIO)
A Public Information Officer is a designated individual responsible for managing all communications between an emergency response organization and the media. Their role is to ensure that the information provided to the public is accurate, consistent, and verified. By acting as a single point of contact for journalists, the PIO helps to manage the flow of information, prevent the spread of rumors, and ensure that the public receives the critical life-saving instructions they need during a crisis.

121. (C) It highlights that messages need to be framed for specific value systems.
Cultural cognition theory explains that people's values and group identities deeply influence how they perceive and react to risk. This means that a one-size-fits-all approach to risk communication may not be effective. To ensure that warnings are understood and followed, messages must be framed in a way that aligns with the values of the target audience. By acknowledging these cultural influences, disaster communicators can design more persuasive and effective messages that motivate people to take protective action.

122. (A) Providing them with support like toolkits, cash, or materials to improve their temporary shelter.
Assistance to self-sheltering populations involves providing resources to individuals who have found their own temporary accommodation, such as staying with relatives. This support can include toolkits for minor repairs, cash assistance for food, or materials like plastic sheeting to improve their current living conditions. Supporting these families where they are helps to prevent them from moving into overcrowded official camps and often supports a faster and more sustainable recovery for the affected community.

123. (B) An Information Management System
An Information Management System is responsible for the systematic collection, analysis, and sharing of data during a disaster. This includes tracking resources like medical supplies and personnel, as well as sharing critical situational information such as maps of affected areas. By organizing this information, the system provides a clear and accurate picture of the incident, which is essential for making informed decisions about resource allocation and coordinating complex operations like airlifts and damage assessments.

124. (B) Statement I is incorrect but Statement II is correct.
Disaster Response Forces are specialized units designed for immediate, life-saving operations during the response phase of a disaster. Their primary roles include search and rescue, medical first response, and clearing access routes to facilitate the delivery of relief. They are not involved in long-term infrastructure development, which is managed by other agencies during the recovery phase. These forces are essential for providing the rapid and professional assistance needed to save lives in the immediate aftermath of a crisis.

125. (C) Standardized and scalable management structure for on-scene operations.
The Incident Response System provides a standardized management framework that can be used for any type of emergency, regardless of its size or cause. Its modular structure allows the organization to expand or contract as the incident evolves, ensuring that the management remains effective. By using common terminology and clear roles, the system ensures that responders from different agencies can work together seamlessly to manage the situation on the ground and meet the incident objectives.

126. (C) I, II, III and IV only
Effective planning for emergency health services must address several critical challenges to ensure continuity of care. This includes preparing for potential damage to facilities, managing a sudden surge in patient numbers, and addressing disruptions in the supply of medicines and equipment. Furthermore, the health and safety of the healthcare workers themselves must be prioritized. Comprehensive planning ensures that these essential services can continue to function and provide life-saving care even under the most difficult and resource-constrained circumstances.

Click Here to Buy book on Amazon

127. (A) Media can be a powerful partner in response but can also cause harm through misinformation or unethical reporting.
The media is a critical but complex partner in humanitarian crises. When reporting is accurate and ethical, it can disseminate life-saving information, facilitate relief, and hold authorities accountable. However, irresponsible reporting can lead to the spread of rumors, cause unnecessary panic, and violate the privacy of victims. Therefore, it is essential for both journalists and emergency managers to work together to ensure that the media serves the public interest and contributes positively to the response efforts.

128. (A) P-4, Q-1, S-2, R-3
The Incident Response System is organized into five major functional areas, each with specific responsibilities. Command is responsible for the overall management of the incident. Operations manages all the tactical activities to carry out the response. Planning is responsible for collecting and analyzing information to develop the response plan. Logistics provides the resources and services needed to support the operation. Together, these functional areas ensure that the response is managed in a systematic and coordinated manner.

129. (B) The duration of use and level of durability.
Emergency shelters are immediate and temporary solutions, such as tents, designed to protect people for a few days or weeks. In contrast, intermediate or transitional shelters are more durable structures designed to last for months or even years while permanent houses are being rebuilt. These intermediate solutions provide better protection, more privacy, and a more stable living environment, allowing families to begin the process of recovery and return to some level of normal daily life.

130. (A) How power imbalances and social inequities are reflected or reinforced in disaster warnings and aid distribution.
The critical tradition of communication examines how social structures and power dynamics influence the exchange of information. When applied to disaster management, this perspective analyzes whether certain marginalized groups are being excluded from receiving warnings or if humanitarian aid is being distributed unfairly. By identifying these potential inequities, managers can develop more inclusive and ethical communication and response strategies that ensure all segments of the population receive the support and information they need to stay safe.

131. (C) A is true but R is false.
A Public Health Emergency Operations Centre is a vital organizational framework for managing health crises. It is not just a physical building but a structured coordination hub where information is analyzed, resources are allocated, and strategic decisions are made. By bringing together health officials and partners, the center ensures a synchronized and evidence-based response to emergencies like pandemics. Its role in managing information and coordinating the public health response is essential for protecting the health of the population.

132. (D) It involves providing comprehensive treatment to each person during the sorting phase.
First aid triage is a rapid sorting process designed to prioritize patients based on the urgency of their needs, not to provide comprehensive medical treatment. During the triage phase, responders perform only the most immediate life-saving interventions, such as opening an airway. The goal is to quickly move through all victims to ensure that resources are directed to those who will benefit most. Comprehensive care is provided later, once patients have been moved to a treatment area.

NODIA

133. (C) To educate the public on preparedness and risk reduction measures.
Mass media serves a critical public service role in disaster management by educating the population about hazards and how to prepare for them. Through news reports, documentaries, and public service announcements, the media can help individuals understand the risks they face and the actions they can take to protect themselves and their property. This educational role is essential for building community resilience and reducing the overall impact of disasters on the lives and livelihoods of the public.

134. (D) I, II, III, and IV

the first trained person at the scene. The incident commander manages the overall operation and sets priorities. Community Based Organizations leverage local knowledge to provide immediate relief at the grassroots level. A Public Health Emergency Operations Centre serves as a specialized coordination hub for medical and health-related aspects of the crisis. Together, these roles ensure a comprehensive and synchronized emergency management effort.

106. (A) Basic Life Support
Basic Life Support refers to the fundamental level of emergency medical care used for victims of life-threatening illnesses or injuries until they can be given full medical care at a hospital. It involves essential skills such as cardiopulmonary resuscitation and the use of automated external defibrillators. These non-invasive techniques focus on maintaining circulation and breathing, which are critical for preventing brain damage and death in the immediate aftermath of a medical emergency or disaster.

107. (D) The transition from relief to development and livelihood creation.
A major challenge for long-term emergency settlements is managing the transition from immediate relief to sustainable development. While initial efforts focus on survival, long-term residents need opportunities to earn a living and regain their independence. This requires planners to integrate livelihood support and economic activities into the camp's management. Failure to address these needs can lead to long-term dependency and social issues within the settlement, making the eventual return to normal life much more difficult.

108. (B) Multi-faceted, encompassing all phases from mitigation to recovery, and involving multiple stakeholders.
Communication in disaster management is not limited to a single phase or a one-way flow of information. It is a continuous and complex process that involves many different actors, including government agencies, media, NGOs, and the public. Effective communication strategies must be applied throughout the entire disaster cycle, from educating people about risks before an event to providing instructions during the response and supporting the community's information needs during the long-term recovery process.

109. (A) Statement I is correct but Statement II is incorrect.
The START triage system is specifically designed for use by first responders in the field, not by specialists in a hospital. Its strength lies in its simplicity, using three basic clinical criteria—respiration, perfusion, and mental status—to quickly categorize victims. This allows for the rapid sorting of large numbers of people in a high-stress environment where immediate decisions are required to prioritize life-saving medical care and ensure that resources are used most effectively.

110. (D) Fictional movies about similar disasters.
Accurate disaster journalism relies on verified and credible sources of information. Key sources include eyewitness accounts from survivors, official briefings from emergency managers, and interviews with first responders who are on the scene. Technical experts also provide valuable context regarding the causes and risks of the disaster. Fictional movies are never a valid source of information for news reporting, as they are created for entertainment and do not reflect the reality of a specific humanitarian crisis.

111. (A) III and V only
Effective emergency response is built on the coordination of specialized personnel and centralized management hubs. First responders, including police, fire, and medical teams, provide the immediate on-scene assistance. The Emergency Operation Center serves as the physical or virtual location where the overall response is coordinated across different agencies. While SOPs provide essential guidance, they are often flexible to adapt to specific situations. Information management systems aim to clarify the situation rather than cause information overload.

112. (B) The ability of the hospital to remain functional and provide medical care during and after a disaster.
The ultimate goal of hospital safety and preparedness is to ensure that the facility remains operational during a disaster. This means the building must be structurally sound

Downloaded from www.pdf.tube

The final phase of disaster reporting shifts the focus from the immediate crisis to the long-term process of rebuilding the community. During this phase, journalists cover stories about reconstruction efforts, analyze the lessons learned from the response, and report on policy changes aimed at reducing future risks. This type of reporting is essential for keeping the public informed about the progress of recovery and for ensuring that the authorities remain accountable for their long-term commitments to the affected area.

142. (D) Controlling bleeding and preventing infection.
In a pre-hospital setting, the most critical aspect of managing a wound is to stabilize the injury and prevent further complications. This involves the immediate application of pressure to stop any severe bleeding and the cleaning and dressing of the wound to protect it from contaminants. These initial actions are vital for preventing life-threatening blood loss and for reducing the risk of infection, which significantly improves the chances of a full recovery once the patient reaches a hospital.

143. (C) I, II, and III only
A Standard Operating Procedure for evacuation provides the essential framework for moving people out of danger. It must include clear criteria for when an evacuation order should be issued and designate the specific routes and safe destinations. A comprehensive communication plan to inform and guide the public is also a vital component. These procedures are designed to save lives and ensure a coordinated and safe movement of the population, and they never include a requirement for victims to pay fees.

144. (B) CBOs have an inherent local presence and knowledge, while INGOs bring external resources and expertise.
The relationship between Community Based Organizations and international NGOs is often complementary. CBOs have deep roots in the community and an intimate understanding of local needs and social structures. International NGOs, on the other hand, can provide significant financial resources, technical expertise, and international experience. By working together, these organizations can ensure that disaster relief is both culturally appropriate and well-resourced, leading to more effective and sustainable support for the affected population during a humanitarian crisis.

145. (C) A is true but R is false.
While social media use has grown significantly in disaster management, its value lies in its ability to facilitate two-way, rapid communication between authorities and the public. It is not a channel that is easy for any single entity to control, as it allows for decentralized and grassroots information sharing. The interactive nature of social media provides emergency managers with real-time feedback and situational awareness from people on the ground, which is essential for improving the coordination and effectiveness of the response.

NODIA

146. (A) A multi-disciplinary group of healthcare professionals like doctors, nurses, and paramedics.
A Health Emergency Team is composed of a diverse group of medical professionals who possess the specialized skills needed to manage a health crisis. This multi-disciplinary approach ensures that the team can address various medical needs, from emergency trauma care to public health surveillance. These teams are trained to work together under high-pressure conditions and are a vital resource for augmenting the local medical capacity when it is overwhelmed by a sudden disaster or disease outbreak.

147. (C) Crafting the message and transmitting it efficiently.
A sender-oriented view of communication focuses on the linear process of delivering a message from a source to an audience. In the context of disasters, this perspective prioritizes the efficient construction and rapid transmission of information by authorities. The goal is to reach as many people as possible with a clear and consistent message. While this approach is effective for broad warnings, it often places less emphasis on feedback and whether the audience has correctly interpreted the information in their local context.

148. (B) P-4, Q-3, S-2, R-1
Shelter strategies are based on different needs and phases of a disaster response. Self-sheltering

involves people finding their own solutions, while emergency shelter provides immediate mass accommodation for survivors. Intermediate shelter offers a more durable, transitional solution while permanent homes are rebuilt. Site selection is a technical process that evaluates potential locations based on safety, water access, and drainage to ensure that any established settlement provides a secure and healthy environment for the displaced population.

149. (C) Search and Rescue Operations
Search and rescue operations are specialized life-saving activities focused on locating, reaching, and freeing people who are trapped or missing following a disaster. These operations often require specialized equipment and trained personnel, such as those who can work in collapsed buildings or water. The goal is to extricate survivors safely and provide them with initial medical stabilization before transporting them to further care. These actions are a critical part of the immediate response phase and save many lives.

150. (B) Balancing information needs with operational security.
A significant challenge in media relations during a crisis is determining what information can be shared without compromising the safety of ongoing operations. While the public needs timely updates, certain details about rescue plans or the location of resources must sometimes be withheld to prevent interference or security risks. Finding this balance requires close coordination between emergency managers and media representatives to ensure that the public remains informed while the safety of responders and victims is always maintained.

151. (A) I, II, and IV only
A Public Health Emergency Operations Centre is designed to manage the coordination and information flow during a health crisis. It is based on incident management principles and facilitates the collaboration of multiple public health partners. While it is essential for resource allocation and surveillance, its primary role is not to provide direct clinical care to patients. Instead, it serves as the strategic hub that ensures the overall public health response is synchronized and effective in protecting the well-being of the community.

152. (A) Audience-centered and culturally sensitive.
Cultural influences play a decisive role in how risk messages are understood and acted upon by different communities. For communication to be effective, it must be adapted to the cultural context of the target audience, considering local beliefs, languages, and social norms. By taking an audience-centered approach, disaster communicators can ensure that their life-saving instructions are seen as relevant and credible, which is essential for encouraging the public to follow the necessary safety measures during a crisis.

153. (C) To stabilize the spine and prevent further movement.
When a person has a potential spinal injury, the priority of first aid is to prevent any movement that could cause further, irreversible damage. The responder should stabilize the victim's head and neck in the position they were found and keep them as still as possible until professional medical help arrives. Any unnecessary movement, such as helping the person sit up, could lead to permanent paralysis or other severe complications. Proper stabilization at the scene is critical for a better recovery.

154. (A) It is primarily a financial aid distribution platform for victims.
The India Disaster Resource Network is a web-based management tool designed to provide a national inventory of equipment and skilled personnel for disaster response. It is not a platform for distributing financial aid to individuals. Instead, it is used by emergency managers to identify and mobilize the specific resources needed to respond to a crisis effectively. By providing real-time data on the availability of these assets, the network ensures a more rapid and coordinated national response to any disaster.

155. (B) Statement I is incorrect but Statement II is correct.
In the color-coded triage system, the 'Green' category is reserved for patients with minor injuries who are often referred to as the 'walking wounded.' These individuals do not require immediate life-saving interventions

Click Here to Buy book on Amazon

and can safely wait for medical treatment. This categorization allows responders to prioritize their limited resources for patients with more critical injuries, such as those in the 'Red' category who need instant care to survive. Triage ensures that medical help is used most effectively in a mass casualty situation.

156. (B) Tools for Social Media
Social media platforms have developed specific tools to assist in disaster response and communication. Features like Facebook's 'Safety Check' allow people in a crisis area to quickly inform their friends and family that they are safe. This tool helps to reduce the anxiety of loved ones and can also provide responders with a better understanding of where people are located. These applications are a practical example of how modern technology is being used to enhance communication and support during a humanitarian crisis.

157. (C) The establishment of community governance structures and livelihood support.
While initial settlement efforts focus on survival, long-term sustainability requires addressing the social and economic needs of the displaced population. This involves establishing governance structures that allow residents to participate in the management of the camp and providing support for livelihoods so they can begin to regain their independence. Addressing these longer-term issues is essential for maintaining social order, protecting human dignity, and preparing the community for the eventual transition back to permanent housing and normal life.

158. (D) Airway
In the basic first aid acronym DR. ABC, the 'A' stands for Airway. Ensuring that the victim's airway is open and clear is the first clinical priority after checking for a response. If the airway is blocked, the person cannot breathe, which will quickly lead to cardiac arrest and death. By gently tilting the head back and lifting the chin, a responder can often clear the airway, allowing the victim to breathe and buying time until professional help arrives.

159. (A) Both A and R are true and R is the correct explanation of A.
The effectiveness of a disaster warning depends heavily on the public's perception of the risk and the credibility of the source. For a warning to be followed, it must be specific, consistent, and come from an authority that people trust. If the message is unclear or the source is not seen as credible, people may ignore the warning, putting their lives at risk. Effective risk communication acknowledges these psychological factors to ensure that life-saving information is both received and acted upon.

160. (B) To inform
A primary objective of mass media during a disaster is to provide the public with clear and accurate information about the scope and impact of the event. This informative role helps people understand the risks they face and the steps they can take to stay safe. By reporting on the current situation, damage, and relief efforts, the media serves as a vital channel for public awareness, which is essential for an effective community response and for the long-term recovery process.

161. (A) I, II, and III only
The Incident Response System is based on several key management principles that ensure a coordinated and effective response. These include the central role of the Incident Commander, the use of a manageable span of control for supervisors, and the implementation of standardized terminology and position titles. These features provide a clear and flexible structure that allows responders from different agencies to work together seamlessly. This system is designed for use in any type of emergency, regardless of the cause or scale.

162. (A) Facilitate inter-agency coordination and resource management.
The primary purpose of an Emergency Operation Center is to serve as a centralized hub for managing the overall disaster response. It brings together senior decision-makers from various government agencies, NGOs, and other partners to facilitate coordination and ensure that resources are allocated efficiently. By centralizing these management functions, the center can develop a single, synchronized strategy for the response, which is essential for addressing the complex and large-scale challenges that arise during a major humanitarian crisis.

Downloaded from www.pdf.tube

163. (C) SAR focuses on locating and extricating survivors, while Relief focuses on providing sustenance to the affected population.
Search and rescue operations and relief operations are distinct but complementary components of a disaster response. Search and rescue is a specialized, immediate task focused on finding and freeing people who are trapped or in danger. Relief operations, on the other hand, focus on the broader and more sustained task of providing life-sustaining assistance, such as food, water, and basic healthcare, to the larger population affected by the disaster. Both are essential for saving lives and reducing suffering after a crisis.

164. (D) The importance of the audience's interpretation, context, and feedback.
A receiver-oriented view of communication shifts the focus from the sender to the audience. This perspective emphasizes that the meaning of a message is not just what the sender intended, but how it is interpreted by the receiver based on their own cultural context and personal experiences. In disaster management, this approach highlights the need for feedback and dialogue to ensure that life-saving information is correctly understood and that the public trust and cooperate with the official instructions.

165. (A) III, II, I, IV
The initial actions of a first responder at a mass casualty scene follow a specific order to ensure safety and efficiency. The process begins with securing the scene to prevent further injury. Once safe, the responder calls for additional help and then performs triage to prioritize patients based on their medical needs. Only after this sorting process can life-saving interventions be directed to those in the most critical condition. This systematic approach maximizes the number of lives saved during a crisis.

166. (B) Ethical principles in disaster communication
Ethical disaster reporting requires journalists to balance the public's right to know with a respect for the dignity and privacy of those affected. Deciding not to show graphic images of the deceased is a clear example of applying these ethical standards. Such decisions help to prevent additional suffering for the families and avoid sensationalizing the tragedy. Maintaining these ethical principles is essential for responsible journalism and for building trust between the media and the community during a humanitarian crisis.

167. (D) To increase the hospital's profits during the disaster period.
A hospital's disaster management plan is a professional document focused on life-saving operations and safety, not on financial gain. Its primary objectives are to ensure the safety of everyone in the facility and to maintain the continuity of care for the community even under extreme pressure. By planning for surge capacity and the efficient allocation of limited resources, the hospital can continue its critical mission during a disaster. Financial considerations during a crisis are focused on sustainability rather than profit.

168. (A) The actions people take to protect themselves and their property from a hazard.
Hazard adjustment refers to the practical steps that individuals and communities take to reduce the potential damage from a disaster. This can include activities like retrofitting a home for earthquakes, purchasing flood insurance, or following an evacuation order. Risk communication is designed to encourage these adjustments by helping the public understand the risks they face and providing them with the information they need to take effective protective action. These adjustments are essential for building long-term community resilience.

NODIA

169. (C) Providing support to the host families (e.g., food vouchers, water purification tablets) to reduce the burden on them.
Self-sheltering populations staying with host families often place a significant strain on the resources of their hosts. To support these people effectively, humanitarian agencies should provide assistance to the host families themselves, such as food vouchers or water supplies. This approach helps to stabilize the living situation, prevents the displacement of people into official camps, and supports the community's own coping mechanisms. It is a more sustainable and humane way to provide relief during the recovery phase of a disaster.

170. (A) Statement I is correct but Statement II is incorrect.

The Incident Response System is designed to be highly flexible and scalable, making it suitable for managing incidents of any size. It does not require all sections to be activated for every event; instead, the system allows the Incident Commander to activate only those functional areas that are needed for the specific situation. This modular approach ensures that the management structure remains efficient and proportionate to the complexity of the response, preventing unnecessary bureaucracy during smaller or less complex emergencies.

171. (D) Clearing debris, restoring public services like water, and inspecting infrastructure.
The Emergency Support Function for public works and engineering is responsible for several critical tasks that facilitate the overall response and recovery. This includes clearing roads of debris to allow for the movement of emergency vehicles and relief supplies. They also work to restore essential public services like water and sewage systems and conduct safety inspections of critical infrastructure such as bridges and public buildings. Their efforts are vital for stabilizing the situation and ensuring the safety of the community.

172. (B) How disasters and response efforts are constructed and understood through social interaction and cultural norms.
The socio-cultural tradition of communication examines how people create and maintain social reality through their interactions. In disaster management, this perspective helps us understand how a community's shared values and cultural norms influence their reaction to a crisis and their participation in the response. By acknowledging these social dynamics, emergency managers can develop more effective and culturally appropriate communication and aid strategies that build on the community's existing strengths and foster social cohesion during the recovery process.

173. (C) Implementing a triage system to prioritize care.
A key element of mass casualty management is the implementation of a systematic triage process to sort patients based on their medical urgency. This system is essential for managing the sudden influx of victims that follows a disaster, ensuring that those with life-threatening injuries receive care first. By prioritizing treatment and resource allocation, the medical team can maximize the number of lives saved within the constraints of the situation. This organized approach is vital for an effective emergency medical response.

174. (D) The public's right to know and the individual victim's right to privacy.
A central ethical challenge in disaster journalism is balancing the media's duty to inform the public with the need to protect the privacy and dignity of individual victims. While people have a right to know about the scale of a disaster, this does not give journalists the right to exploit the personal grief of survivors or broadcast graphic images without consent. Finding this balance requires a high degree of professional integrity and a commitment to ethical standards that prioritize human dignity.

175. (A) To ensure a coordinated, predictable, and efficient response.
Standard Operating Procedures are vital for disaster response because they provide a common framework for all organizations to follow. By establishing pre-defined roles and instructions for critical tasks, SOPs reduce confusion and ensure that the response is conducted in a predictable and efficient manner. This coordination is essential for saving lives and managing resources effectively during the chaotic environment of a crisis. Standardizing procedures ensures that every agency is working toward the same goals using the best available methods.

176. (B) Long-term rehabilitation and physical therapy
Pre-hospital care is focused on the immediate medical needs of a patient from the time of injury until they reach a hospital. This includes basic life support, wound management, and the safe handling and transport of the injured to prevent further trauma. Long-term rehabilitation and physical therapy are post-hospital care activities that focus on the patient's recovery and return to function over weeks or months. Pre-hospital care is strictly about stabilizing the patient and ensuring their survival during the crisis.

177. (B) P-3, Q-2, S-1, R-4
Social media is used in various ways during a crisis to support the response and the community.

Click Here to Buy book on Amazon

is essential for coordinating the overall response and for ensuring that at-risk populations receive the warnings and life-saving instructions they need to stay safe during and after a major humanitarian crisis or disaster.

192. (B) To provide a structured way to collect, process, analyze, and share information.
An Information Management System serves as the analytical core of a disaster response. It provides a structured process for handling the massive amount of data generated during a crisis, transforming it into situational awareness for decision-makers. By verifying and analyzing field reports, the system helps managers understand the full scope of the disaster and coordinate the activities of multiple agencies. This systematic approach to information is essential for effective resource allocation and for ensuring a synchronized and synchronized response.

193. (B) Draining stagnant water and managing solid waste.
Vector and pest control in emergency settlements are achieved through environmental management to reduce the habitats where pests thrive. Draining stagnant water prevents mosquitoes from breeding, while proper solid waste management prevents rodents and flies from gathering. These practical measures are essential for maintaining hygiene and preventing the outbreak of serious diseases like malaria or cholera in crowded conditions. This approach is a more sustainable and effective way to protect the health of the displaced population than relying only on chemical treatments.

194. (A) The use of persuasive language and public speaking by leaders to encourage evacuation.
The rhetorical tradition of communication focuses on the art of persuasion and public address. In disaster management, this perspective highlights how leaders use speech and other symbolic communication to motivate the public to take protective action, such as following an evacuation order. By understanding the techniques of effective rhetoric, emergency managers can design more persuasive messages that build trust and encourage community cooperation, which is essential for saving lives and reducing the impact of a disaster.

195. (C) I, II, and III only
Key functions of a Public Health Emergency Operations Centre include the surveillance of disease trends, the coordination of health resources, and the management of risk communication. These activities ensure that the public health response is evidence-based and synchronized across different agencies. While the center manages the overall health response, it does not typically perform clinical care like surgeries. Instead, it serves as the strategic hub that supports the healthcare system in managing the health consequences of a disaster or pandemic.

196. (D) Are pre-identified, trained, and equipped to manage an incident.
An Incident Response Team is a specialized group of professionals who are prepared in advance to manage the response at a disaster scene. They have the training and equipment needed to provide on-site leadership and coordinate the activities of various agencies. These teams are essential for bringing order to the initial chaos of a crisis and for ensuring that the incident objectives are met safely and efficiently. Their pre-identification and specialized training are what make them effective in managing complex emergencies.

NODIA

197. (C) Media and Public Affairs
Newsworthiness is a central concept in media and public affairs, as it defines the criteria used to decide which events should be reported as news. In a disaster context, factors like impact, timeliness, and proximity determine the level of media coverage an event receives. Understanding these criteria is essential for emergency managers as they work with journalists to ensure that critical life-saving information reaches the public through the most appropriate and effective media channels during a humanitarian crisis.

198. (D) A is false but R is true.
First aid triage is not about providing immediate, complete treatment to every victim at once, as that is impossible in a mass casualty situation. Instead, it is a rapid sorting process used to prioritize patients based on the urgency of their condition and their likelihood of survival. The goal is to maximize the number of lives saved by focusing limited resources on those who need

coordinate with other medical services. This proactive planning is essential for ensuring that the hospital can continue to provide life-saving care when the community's needs are highest and resources are most constrained.

185. (C) The DRF is a professional, often governmental body with specialized skills, while a CBO is a local, grassroots group.
Disaster Response Forces and Community Based Organizations have distinct but complementary roles in emergency management. DRFs are specialized, professional units trained for technical tasks like high-altitude search and rescue or medical first response. CBOs, on the other hand, are local grassroots groups that possess deep knowledge of their community and can provide immediate, culturally appropriate relief at the neighborhood level. Both are essential for a comprehensive and effective response that addresses both technical and social needs during a crisis.

186. (A) Impact and Proximity
Newsworthiness criteria like impact and proximity often determine which disaster stories get the most media coverage. An event in a major city typically has a larger impact on more people and is physically closer to the audience of many media outlets, making it more likely to be reported. While this can lead to an unequal distribution of news coverage, it reflects the media's focus on information that is most relevant and significant to the largest possible audience during a humanitarian crisis.

187. (D) To quickly bury or cremate them to prevent a supposed 'miasma' or airborne plague.
Proper handling of human remains is essential for legal, humanitarian, and psychological reasons, but it is not driven by a fear of plagues. The common belief that dead bodies cause major epidemics is a myth; most pathogens do not survive long in a deceased host. The real priorities are to provide certainty for families, ensure accurate casualty figures, and fulfill the legal requirements for death certification. Managing remains with dignity is a fundamental principle of disaster management and human rights.

188. (B) Ability to walk
In the START triage system, the first assessment is the ability to walk. Responders ask all victims who can walk to move to a designated area. These individuals are immediately categorized as 'Green' or the 'walking wounded.' This rapid sorting allows the medical team to focus their attention on the remaining victims who are unable to move and likely have more serious, life-threatening injuries. This systematic approach is essential for prioritizing care in a mass casualty situation.

189. (A) Statement I is correct but Statement II is incorrect.
Effective media relations during a crisis are built on transparency and the regular provision of verified information. Holding timely press briefings helps to ensure that the public receives accurate news and instructions, which is essential for reducing panic and building trust. Creating an information vacuum is counterproductive, as it often leads to the rapid spread of rumors and misinformation. By working with the media, emergency managers can ensure that their life-saving messages reach a wide audience through credible channels.

190. (D) Environmental impact and site rehabilitation after the camp is decommissioned.
Long-term planning for emergency settlements must consider what happens after the camp is no longer needed. Site rehabilitation involves restoring the area to its original state and addressing any environmental damage caused by the settlement. This is an important part of the long-term recovery process that ensures the host community and the environment are not permanently harmed by the temporary presence of the displaced population. Proper site management includes these considerations from the very beginning of the settlement's establishment.

191. (A) Restoring and maintaining communication links for responders and the public.
The Emergency Support Function for communications is responsible for ensuring that vital information can flow between responders and to the public. This includes repairing damaged infrastructure and providing temporary communication links, such as satellite or radio networks, when normal systems fail. Their work

Downloaded from www.pdf.tube

206. (D) It brings together decision-makers from various agencies to facilitate coordination.
A key feature of an Emergency Operation Center is its role as a centralized hub for multi-agency coordination. It provides a space where senior officials from government, NGOs, and the private sector can share information and make strategic decisions together. This collaboration is essential for managing the complex challenges of a disaster, ensuring that resources are allocated efficiently and that the entire response is operating under a single, synchronized strategy. The center facilitates communication and prevents duplication of efforts.

207. (A) It is a standardized, all-hazards incident management concept.
The Incident Response System is a management framework designed to be used for any type of emergency, regardless of its cause. It provides a standardized organizational structure and common terminology that allows responders from different agencies to work together seamlessly. This 'all-hazards' approach makes the system highly versatile and effective for everything from small local incidents to large-scale national disasters. It is focused on managing the response at the scene efficiently and according to established management principles.

208. (B) Statement I is incorrect but Statement II is correct.
The goal of media and public affairs during a disaster is not to control or restrict information but to facilitate its flow. By providing the media with accurate and timely updates, authorities can ensure that the public receives the life-saving instructions and verified information they need. This proactive approach helps to manage rumors and build public trust in the response efforts. Media and public affairs serve as the essential link between the emergency managers and the community through the press.

209. (B) The safety of the population from environmental hazards and health risks.
Site selection for an emergency settlement must prioritize the well-being of the displaced population. Planners must choose locations that are safe from ongoing environmental threats, such as landslides or flooding, and that provide conditions for maintaining good health, such as access to water and drainage. A safe and healthy site is fundamental for reducing mortality and morbidity among the survivors. These technical considerations are the most important factors in ensuring that the settlement provides a secure environment during the recovery phase.

210. (A) To be the first on the scene to provide immediate assistance.
First responders are the frontline of any emergency response. They are the first trained individuals to arrive at the scene, and their primary role is to provide immediate, life-saving assistance. This involves stabilizing victims, managing immediate hazards to prevent further injury, and initiating the coordination of the overall response. Their rapid and professional action during the initial 'golden hour' of a crisis is often the most critical factor in determining the survival and recovery of the people affected by the disaster.

NODIA

211. (C) The field of public health that deals with the health consequences of disasters.
Health in emergencies is a broad field of public health focused on managing the medical and health impacts of disasters. It includes everything from emergency trauma care and disease prevention in settlements to ensuring the continuity of essential services like maternal health. The goal is to reduce death and disability by addressing the immediate health risks created by the disaster and the long-term health challenges that arise during the recovery process. This comprehensive approach is vital for community health.

212. (D) Plans are in place to maintain essential health functions despite the crisis.
Continuity in emergency health services is about ensuring that vital medical functions are not completely disrupted by a disaster. This requires hospitals and clinics to have plans for maintaining essential services, such as emergency surgeries and treatments for chronic illnesses, while also managing the surge of disaster victims. Continuity ensures that the health system can continue its mission to protect all patients, even when resources are constrained and the facility itself may be facing operational challenges during the crisis.

them most. This systematic approach ensures that the overall medical response is as effective and efficient as possible.

199. (D) The need to relocate the displaced population quickly so the building can return to its original function.
Using existing public buildings like schools for short-term shelter is an effective way to provide immediate housing, but it is not a permanent solution. A major challenge is the need to move the displaced population to more sustainable shelter as soon as possible so that the building can return to its intended function. This requires emergency managers to have a clear plan for transitioning people to intermediate or permanent housing to avoid disrupting essential community services like education.

200. (A) It is composed of members from the community it serves and addresses local issues.
Community Based Organizations are grassroots entities that are deeply rooted in the communities they serve. They are composed of local residents who have an intimate understanding of the area's social dynamics, vulnerabilities, and resources. This local perspective is invaluable during a disaster, as CBOs can provide immediate, culturally appropriate relief and act as a bridge between the community and external agencies. Their primary focus is on addressing the specific issues and needs of their own members and neighbors.

201. (C) The process of spreading a warning message to the people who are at risk.
Warning dissemination is the critical process of delivering life-saving information to the people who are in the path of a hazard. This involves using multiple communication channels, such as sirens, radio, and mobile alerts, to ensure the message reaches everyone in time. The goal is to provide clear instructions on what protective actions to take. Effective dissemination is essential for saving lives and is a core component of risk communication and the overall disaster response effort.

202. (A) Check for the victim's responsiveness.
After ensuring the scene is safe, the first step in basic life support is to check the victim's responsiveness. This is done by tapping the person and asking loudly if they are okay. This quick assessment is critical for determining the severity of the situation and deciding if immediate life-saving interventions like CPR are needed. If the victim is unresponsive, the responder then proceeds to check for normal breathing and activates the emergency response system to get professional medical help.

203. (D) A traditional, non-digital, hand-cranked radio.
Social media tools like Twitter, Facebook, and Ushahidi have become essential for modern disaster management due to their ability to facilitate rapid, two-way communication and crowdsourced mapping. These digital platforms provide real-time updates and situational awareness that are not possible with traditional tools. While a hand-cranked radio is a valuable resource for receiving information during a power outage, it is a one-way broadcast technology and is not considered a tool for social media.

204. (B) It determines how individuals personally interpret and react to a threat.
Risk perception is a central concept in risk communication because it focuses on how people personally understand and feel about a threat. This perception is influenced by cultural values, personal experience, and trust in authorities. If people do not perceive a risk as serious or relevant to them, they are unlikely to take protective action, even if the hazard is scientifically verified. Understanding risk perception allows communicators to design more effective messages that resonate with the public and motivate safety behaviors.

205. (C) Provide immediate, life-sustaining assistance to disaster victims.
Relief operations are the core of the immediate humanitarian response following a disaster. Their primary objective is to provide the essential supplies and services needed for survival, such as food, clean water, basic healthcare, and temporary shelter. These operations aim to stabilize the affected population and reduce suffering in the days and weeks after the impact. By meeting these basic needs, relief efforts provide a foundation for the more complex and long-term work of reconstruction and community recovery.

Click Here to Buy book on Amazon

It provides situational awareness through the aggregation of photos and reports from the ground. Authorities use it for rumor management by sharing fact-checked information. Communities utilize these platforms for emotional support by sharing messages of hope and for resource mobilization by creating crowdfunding pages for those in need. These different applications demonstrate the power of social media to enhance disaster management.

178. (A) Disaster Victim Identification (DVI)
The management of human remains after a large-scale disaster is a highly specialized task known as Disaster Victim Identification. This multi-agency process involves forensic experts, police, and legal authorities working together to accurately identify victims using methods like dental records, DNA, and fingerprints. DVI is a humanitarian priority that ensures remains are returned to families with dignity and that legal requirements for death certification are met. It is an essential part of the disaster management process that provides closure to the community.

179. (C) The "miracle" narrative, focusing on a single survival story while ignoring widespread devastation.
A common bias in disaster reporting is the use of the 'miracle' narrative, where the media focuses heavily on a single story of survival. While these stories are compelling, they can give an inaccurate view of the overall situation by ignoring the widespread suffering and devastation affecting the majority of the population. Ethical reporting should aim for a more balanced perspective that acknowledges individual resilience while also accurately reflecting the full scale of the crisis and the needs of all survivors.

180. (D) A is false but R is true.
Communication in disaster management is not just about issuing top-down commands; it is a complex process that requires the participation of the public. A receiver-oriented view, which values feedback and dialogue, is essential for building trust and ensuring that people understand and follow life-saving instructions. By listening to the concerns of the community and providing clear, two-way communication, emergency managers can foster a more cooperative and effective response that better serves the needs of the people affected.

181. (C) I, II, III, and V only
Site selection for an emergency settlement is based on technical criteria that ensure the health and safety of the displaced population. The site should have flat, well-drained ground to prevent flooding and be located near a safe water source. It must also be a safe distance from ongoing hazards and have good road access for the delivery of relief supplies. These valid criteria are essential for creating a manageable and safe environment that protects the well-being of the survivors during their displacement.

182. (B) A paramedic arriving at the scene of an accident.
A first responder is a professionally trained person who is among the first to arrive at the scene of an emergency to provide immediate assistance. This role is typically filled by paramedics, firefighters, and police officers who have the skills to stabilize victims, manage immediate hazards, and coordinate the initial on-scene response. Their rapid action is critical for saving lives and preventing further harm during the most volatile and dangerous phase of an incident before more advanced medical care is available.

183. (D) The clarity, consistency, and credibility of the message and its source.
The effectiveness of a disaster warning depends on how well the public understands and trusts the information. For a warning to be followed, it must be clear in its instructions, consistent across all communication channels, and come from a source that is seen as credible by the community. If any of these elements are missing, the public may ignore the message, putting their lives at risk. Effective risk communication acknowledges these factors to ensure that warnings are acted upon.

NODIA

184. (A) Developing a robust plan for handling mass casualties.
Hospital emergency preparedness focuses on ensuring the facility can handle the sudden and large-scale needs of a disaster. A central part of this is developing a mass casualty plan that outlines how the hospital will manage a surge of patients, prioritize care through triage, and

213. (C) Prevent further injury and reduce pain during transport.
Pre-hospital care procedures, like applying a splint to a fracture, are designed to stabilize the patient's condition before they reach a hospital. These actions are not intended to fully heal the injury but to prevent further trauma and reduce the victim's pain during the movement and transport process. By stabilizing the injury at the scene, first responders can significantly improve the patient's long-term medical outcome and reduce the risk of complications like nerve damage or infection.

214. (B) Prioritizing care based on the severity of injury and likelihood of survival.
The core principle of first aid triage is to save the maximum number of lives by prioritizing patients who have life-threatening injuries but are likely to survive with immediate care. This systematic sorting is necessary in mass casualty situations where medical resources are overwhelmed and not everyone can be treated at once. By using clinical criteria to categorize victims, the medical team ensures that their limited time and resources are directed where they will have the greatest possible impact.

215. (A) To serve as the central point of coordination for a public health response.
A Public Health Emergency Operations Centre is the strategic hub for managing the medical and health-related aspects of a crisis. Its primary role is to coordinate the activities of various health agencies, manage resources like medical teams and vaccines, and analyze epidemiological data to guide the response. By centralizing these functions, the center ensures that the public health effort is synchronized, evidence-based, and effective in protecting the population from the health consequences of a disaster or outbreak.

216. (A) The number of patients and the severity of their injuries overwhelm the normal capacity of a facility.
Mass casualty management plans are activated when a hospital or healthcare system faces a sudden influx of patients that exceeds its routine operational capacity. This situation requires the facility to shift from its normal individual patient care model to a mass casualty model that prioritizes triage and efficient resource allocation. By activating these pre-defined plans, the hospital can expand its services and ensure that it provides the best possible care to the largest number of victims during the crisis.

217. (C) Both structural integrity and functional plans for disaster response.
Hospital safety and preparedness is a comprehensive concept that includes the physical strength of the building and the facility's operational readiness. A safe hospital must be structurally capable of withstanding hazards like earthquakes and have robust plans for managing disasters. This includes having trained staff, backup utilities, and protocols for surge capacity and evacuation. By addressing both physical and functional preparedness, hospitals can continue to provide life-saving care to the community even when their own operations are under extreme pressure.

218. (A) A complex and multi-faceted process involving many actors and phases.
Communication in disaster management is a broad and continuous process that spans all phases of the disaster cycle. It involving many different stakeholders, including government officials, technical experts, media representatives, and the community. Effective communication is not just about giving orders; it is about providing clear, timely, and culturally appropriate information that helps people understand risks and stay safe. The multi-faceted nature of this communication is essential for a coordinated response and for supporting the community's long-term recovery and resilience.

219. (D) The role of feedback and shared understanding.
Communication models in disaster management differ primarily in their focus on either the transmission of information or the exchange of meaning. Sender-oriented views prioritize the efficient delivery of messages from authorities. Receiver-oriented views, however, place much more importance on feedback and whether the audience has correctly interpreted the information within their own context. This shared understanding is essential for building trust and ensuring that the public understands and cooperates with life-saving instructions during the high-stress environment of a crisis.

NODIA

220. (B) Different social groups might perceive the same risk differently.
Cultural cognition theory helps us understand that risk perception is not purely objective but is influenced by the cultural values of different social groups. This means that providing the same scientific information about a hazard can lead to very different levels of concern and willingness to act among different populations. For disaster communicators, this highlights the necessity of framing messages in a way that resonates with the specific values and worldviews of the target audience to ensure effective action.

221. (C) To provide a channel for public information and warnings.
A primary objective of mass media in a disaster is to serve as a vital channel for disseminating life-saving information and warnings to the public. By reporting on the current situation and providing official instructions, the media helps people understand the risks they face and the steps they need to take to stay safe. This public service role is essential for reducing casualties and for ensuring that the community remains informed and coordinated during the response and recovery phases.

222. (D) The potential for exploiting victims' grief for sensational content.
Ethical disaster communication requires journalists to treat victims with dignity and avoid sensationalizing their suffering. A major ethical challenge is the temptation to exploit the personal grief of survivors to create more compelling or sensational news stories. Responsible reporting should prioritize the well-being of the individuals affected and focus on providing accurate and helpful information rather than using tragedy for commercial gain or higher ratings. Maintaining these ethical standards is essential for the integrity of the media profession.

223. (A) Balancing speed of reporting with the need for accuracy.
A major challenge in disaster reporting is the intense pressure on journalists to provide news quickly while ensuring that the information is accurate and verified. In the chaotic environment of a crisis, rumors can spread rapidly, and reporting incorrect information can cause unnecessary panic or interfere with relief efforts. Finding the right balance between speed and accuracy is essential for responsible journalism and for ensuring that the media provides a reliable service to the public during a humanitarian crisis.

224. (B) A more durable, transitional shelter that can last for months or a few years.
Intermediate or transitional shelter provides a more stable and durable living solution for displaced people after the immediate emergency phase but before permanent reconstruction is complete. These structures offer better protection from the weather and more privacy for families than simple tents. They are designed to support a semi-stable life for an extended period, allowing individuals to restart their daily routines and livelihoods while they wait for long-term housing solutions to be finalized during the recovery process.

225. (B) To provide a framework for coordinating support for a specific functional area.
The primary purpose of an Emergency Support Function is to organize the diverse resources of government and the private sector into functional groups for a more coordinated response. By pre-identifying lead agencies and their responsibilities for specific tasks like transportation or public health, the framework eliminates confusion and duplication of effort. This organization allows for the systematic delivery of support and ensures that all critical functions are managed efficiently by the most appropriate and capable organizations during a disaster.

226. (A) Media Promotion
The Incident Response System is organized into major functional areas that manage different aspects of an emergency. These include command for overall leadership, operations for tactical response, and planning for information analysis. Logistics and finance are also core components. While media relations are a function of the system through the Public Information Officer, 'media promotion' is not a part of this professional response framework. The system's focus remains strictly on the efficient management and coordination of the response to save lives and property.

227. (C) Web-based inventory of resources.

Downloaded from www.pdf.tube

The India Disaster Resource Network is a centralized, web-based platform that serves as a national inventory of equipment and skilled personnel for emergency response. It is a digital tool used by emergency managers to identify and mobilize the specific resources needed to respond to any disaster across the country. By providing real-time data on the availability and location of these assets, the network ensures a more rapid, efficient, and coordinated national response to any major incident or humanitarian crisis.

228. (D) Response
Disaster Response Forces are specialized units trained for immediate, life-saving operations during the response phase of a disaster. Their primary roles include search and rescue, medical first response, and clearing access routes to facilitate the delivery of relief. These forces are deployed in the immediate aftermath of a crisis when their technical skills are most needed to save lives and stabilize the situation. While they also assist in community preparedness, their core function is managing the high-pressure environment of the response.

229. (C) Cleaning the wound and covering it with a sterile dressing.
A key aspect of wound management in first aid is the stabilization of the injury to prevent further complications like infection or excessive bleeding. This involves gently cleaning the wound to remove any contaminants and then applying a sterile dressing to protect it. These initial actions are vital for the patient's recovery and are performed by first responders or trained bystanders before the victim reaches a hospital. Proper wound care at the scene significantly improves the long-term medical outcome for the victim.

230. (B) Are deceased or have injuries so severe that survival is unlikely.
In the color-coded triage system, the 'Black' category is used for victims who are either deceased or have injuries so severe that they are unlikely to survive even with immediate care. In a mass casualty situation where resources are overwhelmed, these patients are categorized as 'expectant.' This difficult decision allows responders to prioritize their limited resources for patients in the 'Red' or 'Yellow' categories who have life-threatening injuries but a higher chance of survival with treatment.

231. (D) All communication activities across all phases (mitigation, preparedness, response, recovery).
The scope of communication in disaster management is comprehensive, covering all activities from educating the public about risks before an event to providing life-saving warnings and instructions during the response. It also includes the critical information needs of the community during the long-term recovery process. Effective communication strategies must be applied throughout the entire disaster cycle to ensure that all stakeholders are informed, coordinated, and capable of taking the necessary steps to reduce risk and save lives.

232. (A) Holding community meetings to understand local concerns and tailor information.
A receiver-oriented view of disaster communication prioritizes the needs and context of the audience. Holding community meetings is an excellent example of this approach, as it allows authorities to listen to the specific concerns of the people and tailor their information and instructions accordingly. By fostering dialogue and understanding, this approach builds public trust and ensures that the information provided is seen as relevant and credible, which is essential for encouraging the public to follow safety measures.

233. (C) The human interest element or impact.
Newsworthiness in disaster reporting is often driven by the impact of the event and its human interest element. A story is considered more newsworthy if it involves a large number of people, significant devastation, or compelling personal accounts of survival and loss. These factors help news editors prioritize which stories will be most significant and relevant to their audience. Understanding these criteria is essential for emergency managers as they work with the media to ensure that critical public information is disseminated effectively.

234. (A) How to verify information from multiple sources before reporting.
Verification of information is a critical professional standard for disaster reporters. In the chaotic and high-stress environment of a

NODIA

281. (A) To provide timely warnings and practical advice to the public.
A key goal for mass media during a crisis is to provide the public with timely warnings and practical advice for staying safe. By disseminating critical information and promoting awareness, the media helps people make informed decisions during disasters. Additionally, the media plays a significant role in facilitating fundraising and volunteer efforts, supporting the overall humanitarian response and recovery process.

282. (B) Invading the privacy of victims and graphically portraying suffering.
Serious ethical concerns arise when media coverage involves the graphic portrayal of human suffering or the invasion of victims' privacy. Such practices can cause additional distress and may even incite panic or spread misinformation among the public. Balancing the need to inform with the responsibility to protect the dignity and well-being of those affected is a major challenge for journalists.

283. (B) a distorted public perception and an inequitable distribution of assistance.
Inherent biases and stereotypes in news reporting can lead to a distorted public understanding of a disaster and its victims. This distorted perception can influence the allocation of aid, potentially resulting in an inequitable distribution of resources. When certain regions or groups receive sensationalized or disproportionate coverage, it can undermine the effectiveness and fairness of the overall humanitarian response effort.

284. (A) recognizing the potential for bias and unethical practices in reporting.
To truly understand news reporting during crises, one must recognize that media operations can involve both helpful information and harmful biases. This involves being aware of how stereotypes and unethical practices can influence the narrative of a disaster. A critical perspective acknowledges the media's power to hold authorities accountable while also considering its capacity for sensationalism and potential harm.

285. (C) stereotypes in reporting can undermine local coping mechanisms.
When media reports depict disaster victims as helpless instead of resilient, it can unintentionally damage the community's ability to cope using their own resources. Such stereotypes often ignore local strengths and can lead to external aid strategies that do not support long-term recovery. This example highlights how the way victims are framed in the news significantly impacts public perception.

286. (D) Factors such as the scale of the event, human interest, and proximity.
Editorial decisions about which disaster events to cover are typically based on factors such as the scale of the incident, human interest, and proximity. These elements determine the newsworthiness of a story and influence how much attention it receives from the media. Significant events that affect large numbers of people or are geographically close are more likely to be reported.

287. (C) chaotic and characterized by a scarcity of confirmed information.
The beginning of disaster coverage is often marked by a lack of verified facts and a sense of confusion. During this breaking news stage, journalists must work quickly to gather information, even though confirmed details are scarce. This phase contrasts with later stages, where more in-depth analysis and recovery-focused stories are possible once more stable and accurate information becomes available.

288. (B) To ensure coverage includes crucial details like safety and relief information.
A specific tool used by journalists helps ensure that their reporting includes vital information such as safety instructions and the availability of relief supplies. By following this guide, reporters can verify that they have covered all essential details that the public needs during an emergency. This systematic approach improves the quality and utility of the information provided to affected communities.

289. (D) response agencies proactively engaging with the media to provide accurate information.
For accurate information to reach the public, response agencies must actively collaborate with the media during an emergency. This proactive engagement helps ensure that the information being disseminated is consistent and timely. By maintaining strong relations with

Click Here to Buy book on Amazon

information that can be shared with the public. By working with journalists, emergency managers can use the media as a strategic partner to disseminate life-saving instructions and warnings. Effective media relations help to build public trust and manage the flow of information during a high-stress humanitarian crisis.

242. (A) "Short-term shelter in existing buildings" is a strategy that:
Short-term shelter in existing buildings is a rapid response strategy that uses community structures like schools, community halls, or gymnasiums to provide immediate housing for people displaced by a disaster. These buildings are chosen because they are readily available and possess basic facilities like electricity and sanitation. While effective for initial relief, this is a temporary measure intended to protect survivors until more durable intermediate or permanent housing options can be established. It allows for a fast and large-scale sheltering of victims.

243. (C) The confusion caused by incomplete, contradictory, or overwhelming information.
In the high-pressure environment of a disaster, emergency managers are often flooded with a massive amount of information that can be incomplete or contradictory. The primary goal of an Information Management System in an EOC is to address this challenge by providing a structured process for verifying, analyzing, and organizing all incident-related data. By transforming raw information into clear situational awareness, the system helps decision-makers avoid confusion and make more effective choices about resource allocation and the overall response strategy.

244. (D) Call for emergency help.
In basic life support, once a single rescuer has confirmed that a victim is unresponsive and not breathing normally, the next immediate priority is to activate the emergency response system. Calling for professional help ensures that advanced medical support and transport are on the way. Only after making this call should the rescuer begin chest compressions or other life-saving interventions. Getting professional help early is critical for the victim's ultimate survival and recovery, as it brings advanced medical tools to the scene.

245. (C) Conducting long-term structural repairs to buildings.
First responders are trained for the immediate, life-saving tasks required during the response phase of a disaster. Their primary roles include assessing the scene, providing medical first aid, and managing immediate hazards. Long-term structural repairs to buildings are part of the recovery and reconstruction phases and are conducted by engineers and construction professionals, not by the first responders themselves. The first responder's mission is to stabilize the situation and save as many lives as possible in the immediate aftermath of a crisis.

246. (B) Every individual reports to a single designated supervisor.
The principle of 'Unity of Command' in the Incident Response System ensures that every person involved in the response reports to only one designated supervisor. This clear reporting structure eliminates the confusion that can arise when people receive conflicting orders from multiple leaders. By ensuring that every responder has a single point of direction, the system improves accountability and coordinates the entire response effort more effectively. This principle is fundamental for maintaining order and safety in a multi-agency emergency operation.

247. (D) Access to safe water and sanitation.
The most critical technical factor in selecting a site for an emergency settlement is ensuring access to safe water and functional sanitation. Without these essential services, crowded camps can quickly become centers for major disease outbreaks, significantly increasing the suffering and mortality of the displaced population. While other factors like safety and road access are important, the immediate survival and health of the community depend on maintaining high standards of environmental hygiene and access to potable water from the very start.

NODIA

248. (A) Prepare the hospital to effectively respond to and manage the consequences of a disaster.
A hospital emergency disaster management plan is a proactive document designed to ensure that the medical facility can remain operational and provide life-saving care during a crisis. It includes protocols for surge capacity, staff mobilization,

and the protection of critical resources. By preparing for these challenges in advance, the hospital can manage the sudden influx of patients and ensure the safety of its staff and visitors while continuing its mission to protect the health of the entire community during a disaster.

249. (C) The protection of victims' privacy and dignity.
Ethical disaster reporting requires a careful balance between the media's duty to inform the public and the responsibility to protect the privacy and dignity of individual victims. While the public needs to know the scale of a crisis, journalists must avoid exploiting the personal grief of survivors or using sensationalized imagery for higher ratings. Finding this ethical balance is essential for maintaining professional integrity and for ensuring that the media provides a helpful service to the community during a humanitarian disaster.

250. (A) Coordinating the provision of shelter, food, water, and other essential services to victims.
The Emergency Support Function dedicated to mass care and human services plays a pivotal role in addressing the immediate needs of disaster survivors. This framework coordinates the efforts of government agencies and non-governmental organizations to provide temporary shelter, nutritious food, and potable water. Additionally, it oversees the distribution of essential relief items and ensures that vulnerable populations receive necessary support. By centralizing these functions, the system guarantees that life-sustaining resources reach those affected efficiently and equitably.

251. (B) To provide pre-defined guidelines for consistent and coordinated actions.
Standard Operating Procedures offer pre-defined guidelines that ensure consistency and coordination among various response agencies during a disaster. These procedures are essential for mitigating chaos and maximizing operational efficiency by establishing a structured framework for actions. By following these established guidelines, different organizations can work together harmoniously to provide a scalable and organized reaction to any emergency situation.

252. (A) A modular organization, unified command, and manageable span of control.
The Incident Response System is characterized by a modular organization, a unified command structure, and a manageable span of control. This framework offers a standardized, all-hazards approach for managing on-ground activities during an emergency. By utilizing dedicated teams and these specific features, the system ensures that responses are organized, scalable, and capable of handling disasters of any magnitude.

253. (C) It is a centralized facility for directing and coordinating response operations.
A centralized facility serves as the hub where decision-makers gather to direct and coordinate disaster response operations. This center acts as the command and control point, managing activities and ensuring that all participating agencies work toward common goals. By centralizing decision-making, it facilitates the efficient management of on-ground activities and the strategic allocation of resources during an emergency.

254. (D) facilitates the flow of critical data for decision-making and warnings.
A robust information system is essential for handling the collection, analysis, and dissemination of critical data during an emergency. This system serves as the lifeblood of the response process by facilitating the timely flow of information necessary for making strategic decisions. Additionally, it plays a vital role in providing early warnings to populations at risk, thereby enhancing public safety.

255. (C) The Incident Response System (IRS).
A standardized, all-hazards incident management concept provides the necessary framework for managing on-ground activities during disasters. This system features a modular organization and unified command to ensure that emergency operations are scalable and organized. By utilizing dedicated incident response teams, this approach allows for a manageable span of control, enabling efficient coordination and execution of critical field tasks.

256. (B) To act as a web-based inventory for locating and mobilizing resources.
The primary purpose of this web-based network is to maintain a systematic inventory of resources

Downloaded from www.pdf.tube

available across the country for disaster response. It serves as a platform that connects resource owners with managers to facilitate the quick mobilization of essential assets. By documenting items ranging from heavy machinery to medical supplies, the network ensures efficient access during critical times.

257. (D) First Responders provide initial local assistance, while Disaster Response Forces offer specialized capabilities.
Initial local assistance is provided by personnel who serve as the first line of defense at a disaster site. In contrast, specialized forces are brought in to handle complex operations that require advanced capabilities, such as intricate search and rescue tasks. While local teams provide immediate relief, the specialized units supplement these efforts with the technical expertise needed for challenging scenarios.

258. (A) They connect formal agencies with affected communities and provide localized relief.
Community organizations are essential for reaching vulnerable populations and providing relief tailored to local needs during an emergency. They serve as a vital link between the affected public and formal response agencies, ensuring that aid is delivered effectively. By acting as a bridge, these groups enhance the synergy between trained forces and the community, leading to more successful outcomes.

259. (C) To ensure that response actors have timely access to necessary equipment and supplies.
The main goal of resource management is to ensure that all responders and agencies have timely access to the equipment and supplies they need. This involves creating systematic inventories to facilitate the quick mobilization of assets like medical supplies or heavy machinery. Efficient management connects resource owners with managers, ensuring that essential tools are available to support a comprehensive response.

260. (A) the synergy between professional forces, community actors, and resource networks.
Successful disaster response is built on the integrated efforts of trained forces, community involvement, and networked resource systems. This synergy ensures that professional capabilities are combined with local relief efforts and efficient access to equipment. By coordinating these diverse actors and tools, the response mechanism becomes more comprehensive, enabling a scalable and effective reaction to various humanitarian crisis situations.

261. (D) Medical interventions provided before a patient arrives at a healthcare facility.
This form of medical assistance encompasses all interventions provided to patients before they reach a formal healthcare facility. It includes fundamental aid for injuries as well as advanced life-saving techniques for critical conditions. The focus is on providing immediate care at the site or during transport to minimize mortality and morbidity in the initial stages of a disaster or emergency.

262. (B) is a set of life-saving techniques specifically for cardiac arrest and respiratory failure.
Specialized life-saving techniques are used to assist victims suffering from cardiac arrest, respiratory failure, or airway obstructions. While general first aid covers a wide range of injuries, these specific interventions are designed for the most critical life-threatening situations. Proficiency in these techniques among responders is essential for improving patient outcomes before they can be treated in a hospital environment.

263. (C) To avoid causing further harm or worsening existing injuries.
Proper techniques for moving and transporting victims are vital to prevent the worsening of existing injuries during an emergency. Incorrect handling can lead to further physical harm, making this a critical component of prehospital care. Ensuring that injured individuals are moved safely helps maintain their condition until they receive more advanced medical treatment, which significantly influences the overall recovery process.

264. (D) healthcare infrastructure is often compromised during disasters.
Disaster planning must ensure that health services remain accessible even when physical infrastructure is damaged or destroyed. Maintaining the continuity of care is vital because medical systems can be compromised during a crisis, yet the need for assistance increases. Effective planning allows for the persistent

NODIA

delivery of essential health interventions, including both prehospital care and hospital-based services, during disasters.

265. (A) The outcome for an injured person can be significantly affected by the initial care they receive on-site.
The initial care and interventions provided at the disaster site have a profound impact on a patient's chances of survival and recovery. Proficiency in prehospital techniques among responders and the public can lead to better medical outcomes by stabilizing victims before they reach formal facilities. This highlights the importance of training and preparation in influencing the results of emergency health services.

266. (B) To sort patients to achieve the greatest good for the largest number of people.
The core objective of sorting patients during a mass casualty event is to maximize the benefit for the largest possible number of people. This systematic approach involves prioritizing care based on the urgency of medical needs when resources are limited. By making difficult decisions about resource allocation, responders can ensure that life-saving interventions are provided to those who will benefit most.

267. (B) serve as a centralized command structure for coordinating the public health response.
This centralized framework provides public health agencies with a command and control structure to manage information and coordinate resources during a crisis. It enables strategic decision-making and ensures that the broader public health response is integrated and organized. By centralizing these functions, the center helps manage the complex demands of large-scale emergencies that exceed normal medical capacities.

268. (A) enabling a hospital to manage patient surge and maintain its own operational continuity.
A comprehensive management plan is vital for hospitals to handle a sudden surge of patients while maintaining operational continuity. These plans outline specific procedures for augmenting staff, ensuring facility safety, and managing resources during a disaster. By preparing for such events, healthcare facilities can continue to function and provide critical care even when the surrounding infrastructure and systems are overwhelmed.

269. (C) measures to ensure the hospital building itself can withstand a disaster and remain functional.
Ensuring that a hospital remains functional during a disaster involves implementing both structural and non-structural safety measures. This preparation allows the building to withstand the physical impact of an emergency, such as an earthquake or flood, while continuing its medical operations. This concept is essential for maintaining the facility's ability to provide life-saving care to victims during a crisis.

270. (D) the number of patients overwhelms the available medical resources.
Specialized management strategies become necessary when a sudden influx of patients exceeds the capacity of available medical resources and personnel. This situation requires a systematic approach to sort and prioritize victims to ensure that care is distributed effectively. By implementing these strategies, healthcare systems can manage the overwhelming demands of large-scale emergencies and minimize mortality in the affected population.

271. (C) Sender-oriented views prioritize message creation, while receiver-oriented views prioritize audience interpretation.
Approaches that prioritize the creation and delivery of a message focus on the sender's perspective, while those prioritizing interpretation focus on the receiver. The former seeks to craft perfect communication, whereas the latter emphasizes how the audience perceives and uses the information. Understanding both is necessary to ensure that disaster warnings are not only delivered but also correctly understood.

272. (B) truthful, transparent, and empowering for the affected public.
Ethical frameworks for crisis communication emphasize the importance of providing information that is truthful, transparent, and empowering for the community. Such a perspective advocates for a dialogue that respects the audience and encourages informed decision-making during hazards. This approach ensures that communication supports public safety while upholding moral standards of honesty and

Click Here to Buy book on Amazon

accountability within the disaster management process.

273. (D) disaster communication can be analyzed from multiple theoretical perspectives.
Disaster communication is a multifaceted field that can be understood through various theoretical perspectives, ranging from technical systems to social interactions. Using multiple traditions allows managers to analyze how information is processed, how reality is co-created, and how cultural values influence public response. This comprehensive approach is necessary for designing effective communication strategies that resonate with diverse and affected populations.

274. (A) The socio-cultural tradition.
This specific communication tradition focuses on how social interactions and shared language shape a community's understanding of their reality. It emphasizes that meaning is co-created through the dialogue between individuals within their cultural context. When applied to disaster management, this perspective helps experts understand how different groups might perceive and interpret warnings based on their shared social values and beliefs.

275. (C) To facilitate an informed dialogue about hazards and safety measures.
The main purpose of risk communication is to foster an informed dialogue between experts and the public regarding hazards and safety measures. It goes beyond simple information delivery by involving psychological, social, and cultural dimensions to ensure the message is effective. This dialogue helps individuals make better choices about protective actions, ultimately promoting public safety and resilience during disasters.

276. (A) The subjective judgment an individual makes about the severity of a risk.
This term refers to the subjective judgment individuals make regarding the characteristics, severity, and personal impact of a potential hazard. It is influenced by an individual's awareness of the hazard and their vulnerability to it. Understanding this subjective process is crucial for disaster managers, as it determines how the public will ultimately react to warnings and safety information provided.

277. (D) the values and beliefs held by their social group.
This theory argues that individuals typically perceive risks in a way that aligns with the core values and beliefs of their social group. People with different worldviews, such as individualists or communitarians, may interpret the same scientific information differently. This suggests that group identity and cultural influences are more powerful than factual data alone in shaping how people understand disasters.

278. (B) the audience's perception and interpretation of the risk.
The effectiveness of a warning message is primarily determined by how the audience perceives and interprets the risk information provided. Simply issuing a notification does not guarantee that people will comply with safety instructions. Success depends on the public's subjective judgment of the hazard's severity, which is shaped by their cultural values, past experiences, and personal awareness of vulnerability.

279. (C) Cultural influences and group values shape how the risk information is interpreted.
Variations in how groups respond to safety messages are often driven by cultural influences and shared social values. These factors shape the way risk information is interpreted, meaning that different communities may reach different conclusions about the same warning. The alignment of risk perception with a group's worldview explains why a single message can produce diverse reactions among populations.

280. (D) cultural cognition and pre-existing values can override factual information.
Factual data alone may fail to produce a consensus on risk because an individual's pre-existing cultural values and group identities often override evidence. People tend to form perceptions that support their worldviews, leading them to ignore or reinterpret scientific facts that conflict with their beliefs. This phenomenon makes it difficult for authorities to achieve universal compliance based on information alone.

Downloaded from www.pdf.tube

298. (B) inadequate sanitation and waste management problems can develop over time in dense settlements.
As people live in high-density temporary settlements for longer periods, problems with waste management and sanitation can worsen. These conditions provide breeding grounds for pests and vectors that carry diseases, making their control a critical long-term issue. Unlike the immediate aftermath, these health risks develop as the settlement remains occupied, requiring ongoing monitoring and systematic intervention to prevent outbreaks.

299. (B) The functional area of "Transportation," coordinated by a lead agency.
A functional category like transportation, which is managed by a lead agency to coordinate various partners, is a clear example of this structured response concept. These areas represent specific capabilities and resources, such as public works or mass care, that are grouped together to streamline the disaster response. This organization helps manage the multi-faceted demands of large-scale emergency situations efficiently.

300. (A) assigning a lead agency to coordinate efforts within a specific functional area.
By designating a specific lead agency for each functional area, this system facilitates the coordination of multiple partners, including non-governmental organizations. This structure ensures that efforts are not duplicated and that resources are used effectively across different domains like health or infrastructure. Such a coordinated approach is essential for managing the complex and varied requirements of a national disaster response.

NODIA

journalists, agencies can prevent the spread of misinformation and ensure that critical safety instructions are clearly communicated to the people at risk.

290. (A) It has introduced tools for real-time updates and direct public engagement.
The emergence of digital platforms has transformed crisis communication by allowing for real-time updates and direct interaction with the public. These tools enable the crowdsourcing of information and provide a way for affected populations to receive immediate instructions. This represents a major shift from traditional one-way communication, allowing for more dynamic and participatory engagement during a disaster or emergency.

291. (C) Provision of materials, tools, or financial assistance.
People who find their own refuge, such as with host families or in makeshift settings, often benefit most from materials or financial aid. Instead of being moved to organized camps, these populations are supported through the provision of tools and supplies that help them maintain their own living arrangements. This approach respects their choices while still providing essential humanitarian assistance.

292. (A) Intermediate shelter is more durable and provides a safer, more private living space.
While emergency shelter provides basic protection from the elements, intermediate solutions offer more durable, private, and secure living spaces for a transitional period. These intermediate structures are designed for a longer duration than immediate shelter and aim to provide a more dignified environment. This distinction is important for planning the progression from the initial disaster response toward long-term recovery.

293. (D) The site's safety from hazards and access to water.
When choosing a location for new settlements, planners must prioritize the safety of the site from natural hazards and its access to essential water sources. Proximity to services is also a vital factor in ensuring the well-being of the displaced population. These criteria help prevent further disasters and ensure that the basic needs of the residents can be met efficiently.

294. (B) mitigate health and social risks by ensuring adequate space and sanitation.
The layout of an emergency settlement must be carefully planned to provide sufficient space and sanitation for all its residents. Proper arrangement is necessary to reduce the risk of disease outbreaks and social conflicts that can arise in dense populations. By organizing the site effectively, managers can create a safer and more dignified living environment for the displaced people.

295. (C) rapid, short-term shelter, particularly in urban disasters.
In cities, existing structures like community centers or schools provide a fast and efficient way to house people immediately after a disaster. These buildings are often used for short-term shelter because they are already standing and can be quickly converted to meet urgent needs. This option is particularly effective in urban areas where land for new settlements might be limited.

296. (D) To prevent the outbreak of diseases carried by mosquitoes and rodents.
Managing pests and vectors is essential in temporary settlements to stop the spread of dangerous diseases like malaria and cholera. In crowded environments with inadequate sanitation, mosquitoes and rodents can thrive, creating significant health risks for the displaced population over time. Systematic control measures are therefore a vital part of maintaining public health as a settlement becomes more established and dense.

297. (A) To structure and coordinate national response capabilities into functional areas.
This coordination framework groups national response resources and capabilities into specific functional areas, such as transportation or medical services. Each area is managed by a lead agency that coordinates the work of various governmental and non-governmental partners. This system ensures that all aspects of a disaster response are handled in an integrated and organized manner to meet complex demands.

Click Here to Buy book on Amazon

crisis, rumors and incorrect data can spread quickly. By using a checklist that includes the requirement to verify information from multiple independent sources, journalists can ensure that their reporting is accurate and reliable. This commitment to accuracy is essential for maintaining public trust and for ensuring that the media provides a helpful service rather than contributing to confusion and panic.

235. (D) The spread of diseases.
The primary purpose of vector and pest control in emergency settlements is to protect the health of the displaced population by preventing the spread of infectious diseases. Crowded living conditions and the breakdown of normal sanitation provide ideal breeding grounds for pests like mosquitoes and rodents that carry dangerous pathogens. By implementing environmental controls and pest management, humanitarian responders can reduce the risk of outbreaks of diseases like malaria or plague, which is vital for the survival of the community.

236. (B) To provide a mechanism for coordinating a specific category of assistance.
An Emergency Support Function serves as a specialized organizational framework for managing a particular type of disaster assistance, such as transportation or public health. By grouping together the relevant resources and expertise from different agencies, the ESF provides a synchronized and efficient mechanism for delivering support during a crisis. This coordination prevents duplication of effort and ensures that the most critical needs in each functional area are met systematically by the most appropriate and capable organizations.

237. (C) Treatment
In the START triage acronym, which stands for Simple Triage and Rapid Treatment, the 'T' stands for treatment. This reflects the system's focus on both the rapid sorting of victims and the provision of immediate, life-saving medical interventions. The goal of the START system is to allow first responders to quickly assess multiple casualties and prioritize their care to save the maximum number of lives in a high-stress environment. The 'treatment' aspect is limited to the most urgent life-saving actions.

238. (A) Statement I is correct but Statement II is incorrect.
Community Based Organizations are often the very first to respond to a disaster because they are already present in the affected area. Far from being ineffective, their deep local knowledge of the community's vulnerabilities, resources, and social structures makes them essential partners in any response effort. CBOs can provide immediate, culturally appropriate relief and help bridge the gap between the affected population and official agencies. Their grassroots presence is one of the most valuable assets in the early stages of a crisis.

239. (A) The mismatch between the needs of the casualties and the available resources.
The fundamental challenge in mass casualty management is the sudden imbalance between the large number of victims and the limited medical resources available to treat them. This mismatch requires a shift from normal medical practices to a mass casualty model that focuses on prioritizing care through triage. The goal is to maximize the number of lives saved by focusing resources where they will have the greatest impact. Managing this resource constraint effectively is the most critical task for emergency medical managers.

240. (B) Frame information in a way that aligns with the values of the target group.
Cultural cognition theory suggests that people's perception of risk is shaped by their cultural values and social identities. Therefore, for risk communication to be effective, it should frame information in a way that resonates with the worldviews of the target audience. By acknowledging these cultural influences, disaster communicators can design more persuasive messages that are more likely to be accepted and acted upon by different segments of the population, leading to a more effective and inclusive public safety response.

241. (B) Systematically manage communication and interaction with the media.
Media relations during an emergency involve the organized and proactive management of communication between response agencies and the press. The goal is to ensure that the media receives accurate, timely, and consistent

NODIA

VISIT:

www.pdf.tube

Download PDFs for:

- ✓ Recommended Textbook Resources
- ✓ Mock Tests with Solutions
- ✓ Chapterwise Question Bank
- ✓ Previous Year UGC-NET Exam Papers
- ✓ Previous Year Assistant Professor Exam Papers

Nodia Editions LLP

125, Sector 6, Vidhyadhar Nagar, Jaipur 302039

MRP. ₹ 840

Downloaded from www.pdf.tube